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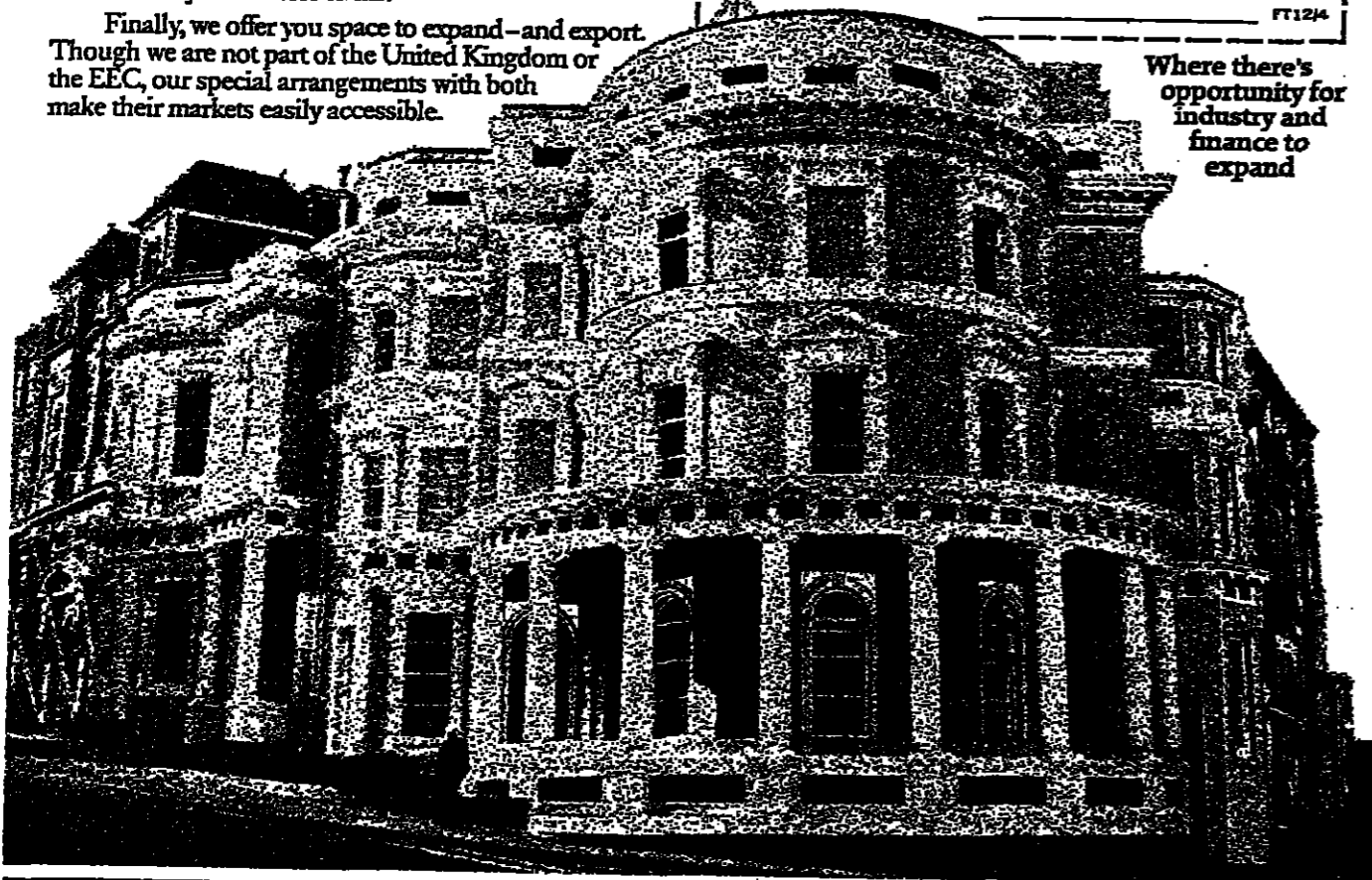
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Where there's opportunity for industry and finance to expand



EUROPEAN NEWS

David Marsh on a unique group in international debt rescheduling

The Paris way with basket cases

"DEBT RESCHEDULING is like divorce—it's become respectable," says a Paris diplomat who is spending an increasing amount of time in international talks on the debt problems of developing countries.

He is a member of a closely-knit group of officials from Western creditor nations which over the years has become known as the "Paris Club." They now meet as often as once a month in the French capital, with little fuss and minimal publicity, to stretch out loan repayments on inter-governmental debt for countries ranging from Poland to Zaire.

The group, linking Treasury and Foreign Ministry officials from about 15 or 16 industrial nations, has been meeting on and off in Paris for 27 years. In that time it has rescheduled debt totalling more than \$180bn. Since the second oil shock of 1973-80, the club's pace of work has speeded up. Over the last six months debt packages have been worked out in rapid succession for Senegal, Uganda, Malawi, Romania, Costa Rica, Sudan and Cuba.

This week the club will focus on the problems of Togo and Romania is next on the list for May. Although each case is treated according to individual country criteria, officials close to the talks say a routine has developed. "It really is a club," one says. Officials are on first name terms and there is "enormous confidence" among the participants.

Reschedulings have become such common practice that the club has worked out a common format for the wording of debt agreements. The accord is typed out in advance on a word processor—all the participants need to do is to fill in the gaps left for the figures and precise terms.

The club's operations are run by the French Treasury, where meetings are normally held. It maintains a six-man secretariat which (in addition to other jobs at the Treasury) keep up to date with the affairs of client countries.

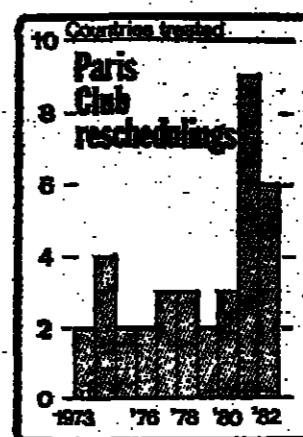
An important part of the work involves close liaison with the International Monetary Fund (IMF). Debt restructuring involves stretching out loan payments falling due during current calendar years over ten years or so. Accords are drawn up only on condition that the debtor country agrees an economic stabilisation package with the IMF.

An exception however was the agreement last month on rescheduling Cuba's debts owed to western governments. Since Havana is not a member of the Fund, the creditor nations, in a special meeting held outside the normal club framework, had to draw up targets for the country's balance of payments itself.

Unless Cuba meets the objectives, no further debt rescheduling will be agreed. Officials admit the deal may be very difficult to police without the Fund's authority to back it up. Creditor nations tried a similar approach by setting targets for Poland—also not a member of the IMF—during rescheduling in 1981, but it was not a success.

The Paris Club reschedulings cover both principal and interest due on government debt agreed under officially-guaranteed export credits or development aid programmes. Debt owed to commercial banks is dealt with under separate negotiations between the debtor government and the banking community.

But the bankers keep a close eye on the Paris Club's affairs. Rescheduling conditions agreed among governments set the



for efficiency by participant countries. M. Michel Camdessus, the head of the Treasury, occasionally takes the chair, but the talks most recently have been presided over by M. Jean-Claude Trichet, a top Treasury official who, other delegates say, is not afraid to enliven the proceedings with the occasional joke.

With the number of countries granting official export credits growing, the Paris Club occasionally has some new recruits. Mexico (which of course has debt problems of its own) turned up as a creditor nation in the recent meeting to reschedule Costa Rica's debts; Abu Dhabi attended talks on Zaire; and Israel has also sent delegates.

Not all Paris Club meetings go smoothly. A few years ago Nicaragua asked for a debt rescheduling, but turned up in Paris without having secured an IMF stability programme to re-shape its battered economy. The meeting was a fiasco.

Sudan has caused the biggest recent headaches. In February it agreed to re-schedule \$500m of payments due to governments this year, together with arrears. Because of the country's economic plight, repayment is being spread over an unusually generous 18 years, with a six year grace period.

The country's debts originally due this year would have more than eaten up the whole of its anticipated export earnings. With a total foreign debt of over \$7bn—much more than the \$4bn which was earlier estimated when the country approached the Paris Club last year—diplomats believe western governments will have no choice eventually but to write off export credits to Khartoum.

Cuba to meet creditors, Page 7

pattern for deals with other creditors. In practice, the banks grant slightly stiffer terms because they reschedule only principal, not interest. But the agreements are interlinked. Cuba, for instance, is now negotiating with a consortium of banks led by Credit Lyonnais a rescheduling of its banking debt in line with the just-agreed government package.

Accords normally take 1½ to two days to work out. Although a French official chairs the meeting, consensus is reached without the need for a vote in the last traditions of Anglo-Saxon informality. The club has no formal rules or statutes.

Conversations are held in both English and French with interpreting facilities laid on. The main language is English, with only the host officials, the Spanish and the Italians (who, according to one waggish delegate, are often incomprehensible in any language) regularly speaking French.

The French officials take clear pleasure in running the meetings and are given full marks

Survey shows 8% of Poles below headline

BY CHRISTOPHER BOBINSKI IN WARSAW

THE INCOMES of some 2.7m Poles, or 8 per cent of the population, are considered inadequate to buy basic food and clothing, according to a survey of standards of living conducted by the Central Statistical Office. Only 8 per cent thought their incomes covered all their needs.

The survey involved a nationwide sample of 55,000 families late last year, and

was the first attempt on such a scale to measure subjective views about standards of living in Poland. The full results are expected to be published in the next few months.

The few details printed yesterday in the Rzeczpospolita newspaper showed that 39 per cent of farmers considered their incomes sufficient for their needs.

This will provide ammunition for those in the Government arguing that farm incomes must be restrained.

Predictably, most pensioners feel themselves badly off, with 18 per cent reporting their failure to make ends meet. Some 31 per cent of the population as a whole is coping only by buying the cheapest food and clothing. Further up the scale, 20 per

cent said they were comfortable but had to be careful about their spending.

The survey reveals, however, that 40 per cent of the population is managing to save money.

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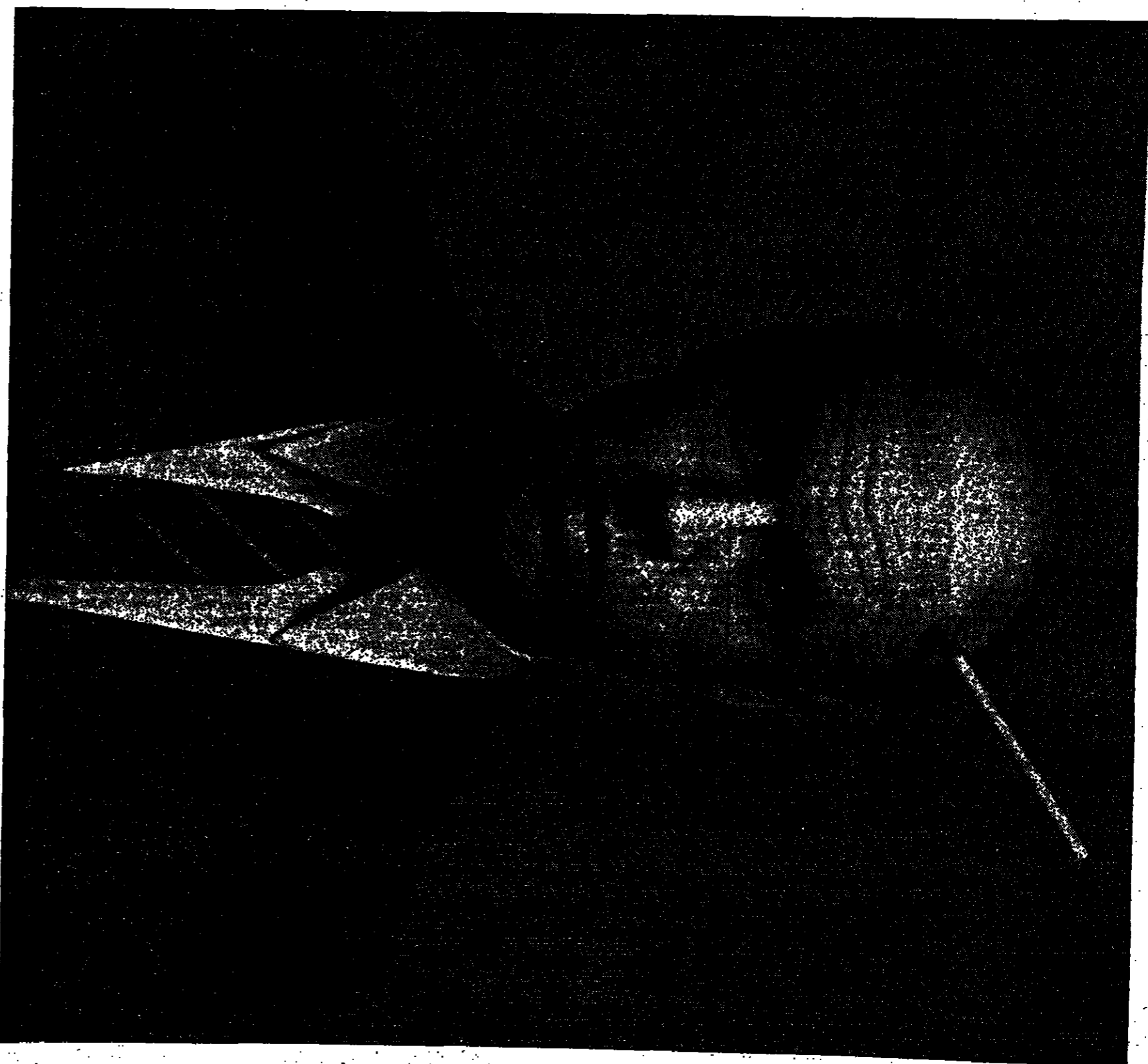
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British Airports Heathrow

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U.S. banks urged not to withdraw from lending

By William Hall in Puerto Rico

U.S. REGIONAL banks must not pull out of the international banking market at short notice if the world banking crisis is to be solved, Mr Peter Cooke, head of banking supervision at the Bank of England warned yesterday.

Mr Cooke, who is one of the world's leading banking supervisors and has been intimately involved in diffusing a recent international banking crisis, was addressing 700 bankers at the annual convention of the Bankers' Association for Foreign Trade (BAFT), in Puerto Rico. He warned that "the mapping of just a few strands weakens the whole fabric to the detriment of all."

Mr Cooke's warning was particularly relevant since it was addressed to an audience of mainly regional U.S. banks. More than 1,000 U.S. banks have lent money to Mexico and many have been warring to pull out of international lending as Mexico's financial problems have mounted.

Mr Cooke said that some banks are no doubt wishing they had not undertaken the international business. Some argue that they do not understand the business and events have demonstrated very clearly that they and their depositors would be better served if they were to stick to domestic business in future.

Balance sought

"I understand that argument, but I cannot say it should prevail in current circumstances," said Mr Cooke. "What may be perfectly reasonable for one bank is unreasonable for a large number of banks which, acting collectively, have the effect of imposing severe contraction pains on the system."

A balance must be struck between the interests of borrowers and lenders if crises were to be prevented and careful judgments were needed to arrive at the appropriate involvement of individual banks.

Mr Cooke emphasised that central bank involvement in recent debt negotiations was essentially "to set out to ensure that the banks involved were fully aware of the overall situation in which they had become involved." He denied that there had been any arm-twisting and said that the final decision had been up to the banks themselves.

He said there were always some inhibitions by the authorities to impel banks to take certain actions under certain circumstances because "it seems to carry with it some kind of implication of underlying support for those institutions which followed that course of action. This is a very delicate path which has to be tread," said Mr Cooke.

Closer scrutiny

Turning to the short-term money markets, he said that the maintenance of essential flows in the interbank markets was extremely important for everyone's interest. He added that banks will need to pay closer attention to the nature of the relationships they enter into in the interbank markets.

They could, with benefits, scrutinise rather more closely over the longer term, establish better guidelines for themselves and have a better understanding and knowledge about the way the short-term funds are being used.

AP-DJ adds from Washington: Federal Reserve Board chairman Paul Volcker, speaking to the Senate Banking Committee, said that if lenders withdrew from foreign lending abruptly, financial crises could be precipitated in "otherwise credit-worthy countries."

Mr Volcker said a "balanced, sound, long-range approach" is needed on foreign lending activities of U.S. banks.

Cubans to meet creditors on short-term debt

By Peter Montagnon, EUROMARKETS CORRESPONDENT

CUBAN officials are to meet with their leading international bank creditors in Paris on Friday in an effort to hammer out terms for the extension of more than \$200m (£131m) in short-term debt.

The talks form a vital and final part of the country's efforts to renegotiate its \$3.2bn foreign debt. Cuba has already reached a tentative agreement with its bankers on the rescheduling of some \$140m in medium-term debt due this year and agreed with Western governments to reschedule \$400m over 8½ years.

But the short-term debt talks are likely to prove particularly delicate because they will involve the conversion of interbank lines into full short-term loans. Cuba has told the banks that, unless they agree, it may have to revise other parts of

Effort intensifies to secure end to fighting in Central America

BY HUGH O'SHAUGHNESSY

INTENSE diplomatic activity is under way in Western Hemisphere and European capitals to find a negotiated solution to the fighting and tensions in Central America. The Left-wing Sandinista Government in Nicaragua, which has been accusing the U.S. Government of backing an invasion of its territory by counter-revolutionary forces based in Honduras, has

repeated its support for the "Contadora Plan" launched by the Foreign Ministers of Panama, Mexico, Venezuela and Colombia in January at their meeting on the Panama island of Contadora. The plan, which called for a halt to the supply of foreign military aid to the countries of Central America and the withdrawal of foreign troops from the Isthmus, was also

backed by the Presidents of Colombia, Panama and Costa Rica who met in the Panamanian capital at the weekend. For its part the military dominated Government of Honduras, which has increasingly close relations with Washington, is still pressing for the Organisation of American States (OAS) to take a role in mediation

efforts. The Nicaraguan Government has rejected the OAS as an inappropriate forum because of its close links with U.S. policies. The proposal that the United Nations should assume a more active role in the Isthmus, which was put forward by Sir John Thomson, the permanent British representative at the UN, when he chaired the debate in the Security Council

last month on the invasion of Nicaragua, has received increasing support. It has been backed by France and is understood to have attracted the personal support of President Miguel de la Madrid of Mexico. Britain is not expected to push its proposal ahead of any diplomatic initiative being taken by the countries of the region. At the same time,

however, the British plan, backed as it is by France, could form the basis of a peace proposal tabled by the European Community as a whole. A European plan would be expected to cover Nicaragua, El Salvador, Honduras and possibly Guatemala, where operations by the forces of Gen Efraim Rios Montt, have claimed many thousands of lives.

Proponents of an increased role for the UN in Central America point to the fact that Sr Javier Pérez de Cuéllar, UN Secretary-General, is an experienced Peruvian diplomat and that some policy makers in Washington realise that the OAS has neither the reputation of impartiality nor the diplomatic expertise to carry through a complicated mediation operation.

Andrew Whitley visits Grenada, described as a threat to the U.S.

Fear and resentment under the nutmeg tree

THE NOTICE on the wall of the reading room in Grenada's main public library is more menacing than the customary threats of fines for delinquent borrowers. "There are three categories of workers," the notice reads, "Fits, misfits and counterfits (sic): which category are you?"

The two-storey, stone building on the harbour at St George's, Grenada's old fashioned little capital, does not look capable of harbouring such Stalinist sentiments. Its dour exterior has the look of a Baptist chapel in the north of England. But then, Grenada as a whole does not appear to fit the description U.S. President Ronald Reagan has given it of being a "threat to the security of the U.S."

An exhaustive tour of the atrocious road which crosses the hilly, heavily forested island threw up no trace of the alleged submarine base Grenada is said to have set up, nor of the missile emplacements the U.S. President has said he fears.

As for the new \$71m international airport which Cuba is helping to finance and build—prompting Western concern that it could be used as a staging post for Cuban or Soviet adventures—the emerging runway and terminal buildings are plain for all to see. So, too, are the 250-odd Cubans working on the site.

Their target is to get the airport at least functional by next March, in time for the 50th anniversary of the coup which brought Mr Maurice Bishop's New Jewel Movement to power in 1979.

"For those of you who haven't been to Point Salines recently, it is essential that you go and view the runway," Brother Bernard Coard, Grenada's Finance Minister and ideologue, told a mass meeting in February, while presenting the 1983 budget. Many Grenadians do just that.

But while the Government dismisses the U.S. Administration's statements out of hand, it is still preoccupied by what it sees as the real threat of a "Bay of pigs"-style mercenary invasion, backed by the U.S. Since the overthrow of Sir Eric Gairy, the elected Prime Minister who ran Grenada as his personal fiefdom, Mr Bishop's Left-wing Government has had to cope with the active hostility of Washington. In recent months the chorus of denunciations has been stepped up to such a pitch that many in Grenada fear Mr Reagan will have to act to back up his words.

The strike into Nicaragua by anti-Sandinista rebels supported by the U.S. has heightened tensions in its ally Grenada. "This build-up of propaganda against us may lead to a hostile act," said Mr Union Whiteman, Grenada's Foreign Minister, adding that the army and militia were on the alert. A U.S.-backed force of exiles and

mercenaries is being trained in Miami, he charges.

Cuban assistance to Grenada in the military, technical and financial fields has been substantial.

One night last September, during an unusually long black-out, at least six Soviet-built armoured personnel carriers were brought ashore in great secrecy. No longer will it be possible for 47 men armed with smuggled rifles to overthrow the Government, as the New Jewel Movement did.

Mr Bishop has made clear by his actions that he has no intention of allowing any opposition to develop. Up to 100 known or suspected opponents are being

held without trial in a former barracks on the hill above St George's, a substantial number in a population of only 110,000.

There is no doubt that the Bishop Government is working hard to develop the country's agricultural resources and make out at least the stagnation of the Gairy era. The World Bank, for one, has been impressed by the progress of recent years.

According to Mr Coard, unemployment has dropped from 49 per cent at the time of the coup to 14 per cent, economic growth last year was a creditable 5½ per cent, and living standards are rising.

Earnings from tourism are critical because of the large

and probably permanent, external trade deficit. Last year's deficit of EC\$101m (£26m) was double Grenada's total export earnings.

The principal exports of bananas (Geest, the UK company, is the monopoly buyer), nutmeg and cocoa have not done particularly well in recent years. Nor has the tourist industry.

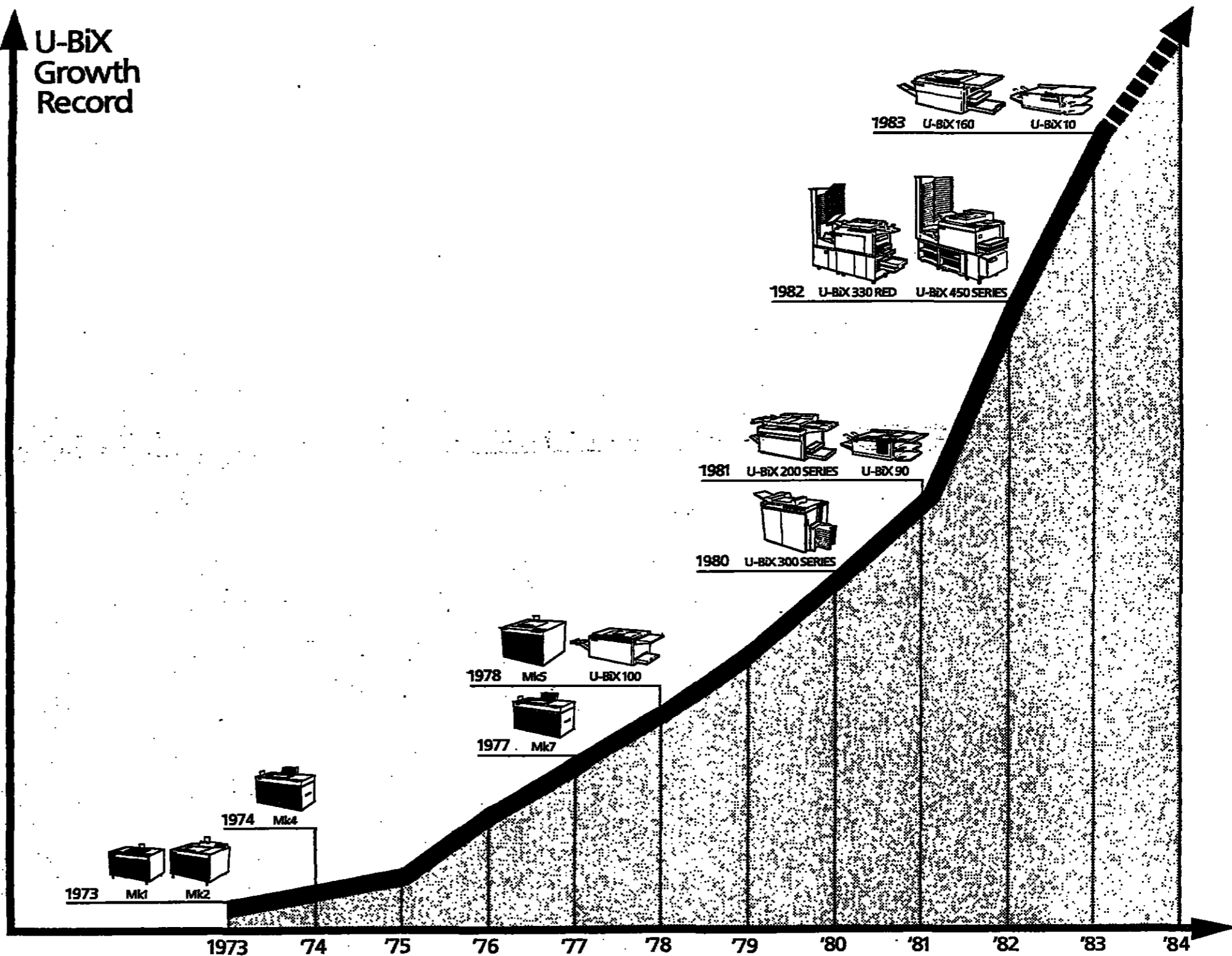
Meanwhile capital expenditure is growing at a phenomenal rate: up from EC\$16m in 1979 to EC\$101m last year. To fund the programme of civil works and fledgling industries, Grenada has inevitably become more dependant on foreign aid and loans.



Both the U.S. and Britain have refused to consider new assistance, while the Soviet bloc has, in contrast, stepped up its help with credits, equipment and long-term import commitments.

Nearly 40 per cent of this year's planned capital spending is earmarked for the new airport, designed to pave the way for a "new economic era" as the tourists flock in. Modern

jets cannot use the existing tiny airport. But whether Western tourists clutching hard currency will indeed pour in when the airport opens is very much an open question.



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UK NEWS

£20.4m loss for Inmos after high start-up costs

By Jason Crisp

INMOS, the controversial, state-backed microchip company, made a loss of £20.4m on sales of £13.7m last year but is expected to move into profit in 1984.

The losses reflect the high start-up costs of the company intended to give Britain a presence in the mass-market microchip business. A major part of its costs last year was the establishment of a large, new semiconductor plant in Newport, Wales.

Inmos, founded in 1978, has received about £115m in backing from the Government in the form of equity, guaranteed loans and grants. At the beginning of this year the Government reluctantly provided the final £15m in equity. The company is expected to try to raise private finance before the end of this year.

Inmos sales rose to £13.7m last year from £2.14m in 1981. Sales in the first quarter of the present financial year are more than £5m, and for the full year are expected to be well over double last year's figure.

More than 80 per cent of Inmos's sales are in the U.S. where it manufactures most of its output at its first factory in Colorado Springs. Production at the second plant in Newport is being rapidly stepped up and a second shift is being recruited with a third expected to

start in September. Total employment is just under 1,000.

Inmos claims to have about 80 per cent of the market for fast static 16K random access memories (RAMS). (These are very specialised high performance memory microchips used mainly by the military but also in telecommunications).

It recently entered the fiercely competitive market for 64K dynamic RAMS. Dr Richard Petritz, managing director of Inmos was optimistic about the market for these chips because of shortages.

Malcolm Wilcox, the retired banker who was appointed chairman of Inmos when the Government injected its extra £15m, refused to give any indication yesterday of when Inmos would seek private finance.

Inmos will try to find extra sources of finance to back its revolutionary and unproven microprocessor product the "transputer." It is claimed, the transputer will not only replace existing microprocessors but also be the building block for the so-called "fifth generation" of computers.

Inmos hopes to get Government support for the development of the transputer as part of its function in the fifth generation of computers.

See Page 18

Editorial comment, Page 16

Gloomy report on jobs under attack

By Gareth Griffiths

THE GOVERNMENT and the Confederation of British Industry (CBI), sharply criticised a paper produced for yesterday's meeting of the National Economic Development Council (NEDC) which argued there was no prospect of an increase in jobs during the 1980s.

Government representatives at the meeting of Government, industry and unions felt the report failed to consider the more favourable economic developments of recent weeks. The CBI also said the report gave an unacceptably depressing picture.

The National Economic Development Office (NEDO) has been told to specify details and sharpen up those issues which the NEDC should consider to help the economy achieve a better performance. These will be considered later, possibly next month.

The Government feels that NEDO has failed to consider the service sectors which it believes will create a great deal of employment. Mr Geoffrey Chandler, NEDO's director general, said the fundamental assessment had not been invalidated by any changes since it was prepared.

The report draws together the assessments of the NEDC's 48 sector committees on their industries' medium-term and long-term performances to the end of the decade.

Training for the employed, Page 10

Duty-free sales likely to stay

By Michael Donne, Aerospace Correspondent

SALES of duty-free goods for air travellers within the EEC seem likely to continue, after a change of mind by the European Commission. These sales generate substantial business annually for airlines and airport authorities. The British Airports Authority (BAA) alone earns £74m a year from concessions at airports, including duty-free goods sales.

The EEC some time ago proposed legislation within the Community abolishing this facility, arguing that it was a privilege for air passengers denied to road and rail travellers.

After much lobbying by the BAA, airlines and others, including some governments, the European Commission has asked the Council of Ministers to legislate in favour of the duty-free goods trade and clarify the existing law.

A new "proposed draft directive" has been issued by the EEC, endorsing the principle of duty-free allowances within the EEC but retaining reductions in the scope of those allowances in some countries.

The draft directive specifies that the allowances in Britain for arriv-

ing passengers would be the standard throughout the EEC.

Mr Philippe Hamon, the BAA's head of marketing, says this turnaround is largely the result of BAA's lobbying against the original proposals.

He says: "We still have a long way to go, as the proposals have to be thrashed out by the European Parliament, the Economic and Social Affairs Committee and a host of other officials, before the Council is able to make its decision - and the Ten Finance Ministers must be unanimous."

Mr Hamon believes, however, that the latest development is a step in the right direction, as two cases still before the European Court could lead to the abolition of the allowances, because of the ambiguous state of existing law.

He says: "The existence of the draft directive, we hope, will assist the Court in interpreting this law and avoid a ruling which would undermine the profitability of transport industries, causing a sharp increase in the cost of air and sea travel in Europe."

Harland and Wolff to make further 700 workers redundant

By our Belfast Correspondent

HARLAND and Wolff, the state-owned Belfast shipyard, is to make a further 700 workers redundant. Last year 1,000 job cuts were announced as part of a programme to reduce overheads.

Management of the loss-making company told union representatives at a meeting in Belfast yesterday that the latest redundancies would all take effect in the first week of July. The main cause is simply a lack of work.

Losses in the 15 months to March 31, 1982 fell to £26.2m, an improvement on the two previous years. A further improvement may be expected for 1983, but the results will not be published for several months.

The company also intends to introduce short-time working as necessary from July to cope with gaps in the workload. Last year, after a report from management consultants, Harland and Wolff set about cutting £11m off its annual £40m overheads. It said then that this would involve more than 1,000 job losses, about half of which have now taken place.

The latest cut in the workforce will reduce the yard's manpower to 5,000. Only two ships remain on the order book - a crude oil carrier for BP to be delivered later this year and a bulk carrier for British Steel.

Negotiations are taking place on the financing of an order for four ships worth £70m. The contract would involve four refrigerated ships for the Blue Star Line and are seen as particularly crucial for the yard's short-term future.

Mr John Parker, Harland and Wolff chairman, said the Blue Star order would ensure the company's survival and give it one of the best order books of any British merchant shipyard. If the company failed to get the order it would face a crisis.

The company is under instructions from the Government to reduce its dependence on public money. Mr James Prior, the Northern Ireland Secretary, has told the directors that the present level of subsidy (about £45m last year) cannot go on.

Midland ends \$ business at Lloyd's

By John Moore, City Correspondent

MIDLAND BANK's approved Lloyd's insurance broking companies are withdrawing all their U.S. dollar business within the market because the bank does not wish to comply with new Lloyd's regulations covering dollar transactions.

Midland Bank, which has two Lloyd's companies which have operated in the market for the last three years, said yesterday that under the new rules, "we are required to enter into a registrable legal charge against group assets under the Lloyd's proposals." The group added that this was not acceptable. "We have a reputation for standing by our subsidiary companies without that sort of arrangement which could create a precedent in our other activities."

Midland said that it was not its policy to provide such a charge over its assets since compliance with the regulations could open the floodgates to a host of similar requests from other organisations.

The new rules came in force at Lloyd's in January when Lloyd's told insurance brokers that new trust deeds were to be executed in order to ensure that the U.S. dollar business was properly segregated away from their other activities and incorporated in their "insurance broking account."

Lloyd's is expected to discuss the move by Midland and its two Lloyd's companies - Midland Group Insurance Brokers and Midland Bank Insurance Brokers - when it will be decided whether it is appropriate for the Midland's insurance broking operations to retain Lloyd's status because of the non-compliance with Lloyd's rules.

Visa gives larger role to banks

By Alan Friedman

VISA, the international payment systems group, yesterday announced a package of "strategic changes" in its policy which will result in the reduction of the Visa trademark symbol on plastic cards and an enhanced role for member banks.

Mr Joao Ribeiro da Fonseca, general manager of Visa Europe, denied the change had resulted from pressure on Visa from member banks. "This is our reading of the market's evolution rather than any political pressure," he commented.

In recent months a number of bankers in the Visa network have complained privately that the organisation was playing too dominant a role in guiding the credit card policies of its banks. There is particularly violent opposition to the Visa organisation in West Germany, where banks have effectively barred the card and other Visa products and have allied themselves with American Express instead.

Uphill struggle for Sotheby's suitors

STEPHEN SWID and Marshall Cogan, for all their involvement in the U.S. art gallery world, were hardly well-known in international art dealing.

They moved on-stage last December with the announcement that they had bought 14 per cent of Sotheby's, the London fine art auctioneers, and yesterday stepped into the full glare of the spotlight with their £61m offer for the entire company.

The two Americans are having an uphill battle to establish their credentials with the shareholders and senior staff of a business which is as much a British institution as a commercial venture. Sotheby's management has as good as dismissed them as upstart manufacturers of carpet underlay with little knowledge of the art world.

Mr Swid, 42, and Mr Cogan, 45, by contrast stress the seriousness of their involvement in the U.S. arts scene and the high quality of designers who have co-operated in their furniture-making activities. Mr Swid lists connections with the Metropolitan Museum of Art and the Guggenheim Museum in New York, while Mr Cogan points to his links with the Museum of Modern Art in New York and Harvard University's Visiting Arts Committee.

Both men also have sizeable art collections of their own - Mr Cogan has an "eclectic" combination of pre-Columbian, early 20th-century European and American regional art, while Mr Swid has an American collection.

Asked about the value of their pictures, Mr Swid describes it as subjective. "It lies in the pleasure of looking at it," he said.

Both men are also keen to emphasise the role that high quality furniture plays in their business activities. Knoll International, the furniture side, had 1982 turnover of \$160m compared with \$150m from General Felt.

Ironically, but significantly in the light of the present bid battle, Knoll International is not able to use its own name on its furniture in Britain.

One of the Knoll brothers licensed the British furniture company Frederick Parker and Sons to make a type of tension spring in the 1930s. Some time in the late 1940s Parker changed its name to Parker Knoll, and Knoll International, which has no link with Parker Knoll, has since sold its furniture in the UK under the "Form" label.

Swid and Cogan attempted to persuade the Sotheby's board to approve an agreed bid for the company at a meeting on Sunday. But the meeting, described by the Americans as "very formal, very British"

and by Sotheby's as "courteous and cool" achieved nothing.

Both men are critical of the way the present Sotheby's board has managed the company.

A main reason for the offer is their shared concern "for a unique institution whose traditional role"

Charles Batchelor examines an unswelcome bid for one of the world's leading fine art auction houses

tion as the premier auction house of the world is under threat.

"Sotheby's business during the past few years has deteriorated to the point where its market share has fallen behind that of its traditionally smaller competitor. Although the worldwide economic downturn has inevitably affected the art market adversely, Sotheby's would appear to have suffered disproportionately," they said.

Sotheby's made a loss of £3.06m in the year to August 31 1982 compared with a profit of £7.04m the year before.

The problems arose from Sotheby's rapid expansion into the British provinces and overseas during the late 1970s. At the point of its maximum financial commitment, demand for medium quality works of art fell away because of the recession.

Swid and Cogan argue that Sotheby's reaction, which has been to cut many of its operations, is short-sighted. The company left its freehold auction rooms in Los Angeles, laid off staff and moved into smaller rented premises.

Sotheby's chief executive, Mr Graham Llewellyn says the company is not willing to "slaughter" its assets when it does not need the money.

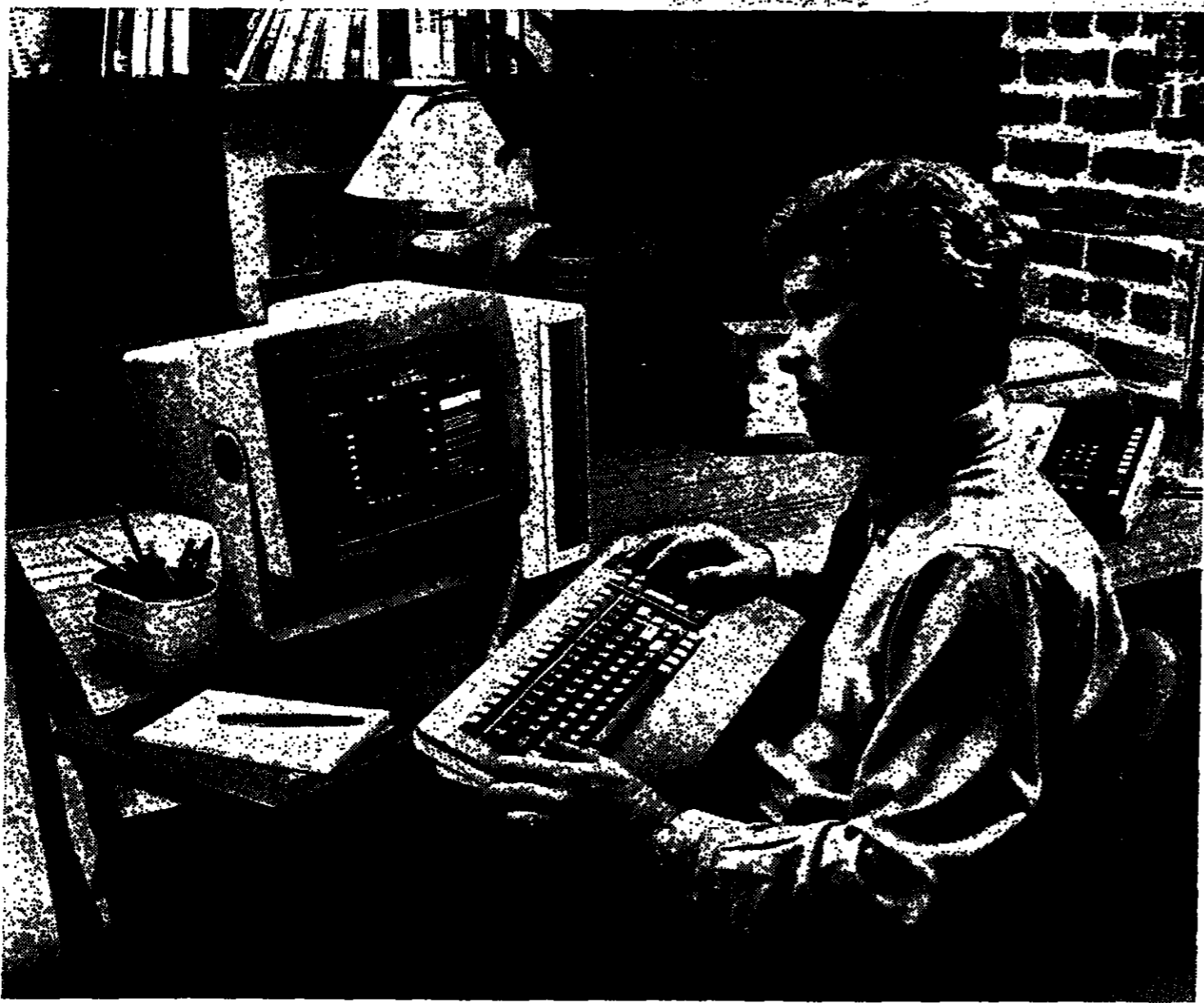
The two Americans contrast this with the success of their own business which is based in Saddlebrook, New Jersey, but which employs 3,000 people in 15 factories around the world.

Since acquiring Knoll International in 1976 Mr Swid and Mr Cogan have expanded it from a company making \$1m pre-tax profits on turnover of \$60m to one with profits of \$15m on turnover of \$180m.

The two men own 33 per cent each of the holding company, GFI/Knoll, with the remaining shares held by 14 individuals and institutions, none with a holding of more than 5.5 per cent.

The bid for Sotheby's is being made through a newly-formed subsidiary, Knoll International Holdings Inc, which is 90 per cent owned by GFI/Knoll, with 10 per cent held by nine other investors.

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Union to rule on steel strike

THE EXECUTIVE of the Iron and Steel Trades Confederation, the leading steel union, meets today to decide whether to step up its strike in Yorkshire after the British Steel Corporation's refusal to refer a wages dispute to arbitration. Last night talks continued between the union and the Corporation aimed at ending the strike which has halted the South Yorkshire plants.



uesday April 12

Midland
ends \$
business
at Lloyd's

John Moore, City
correspondent

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Charles Batchelor ex-
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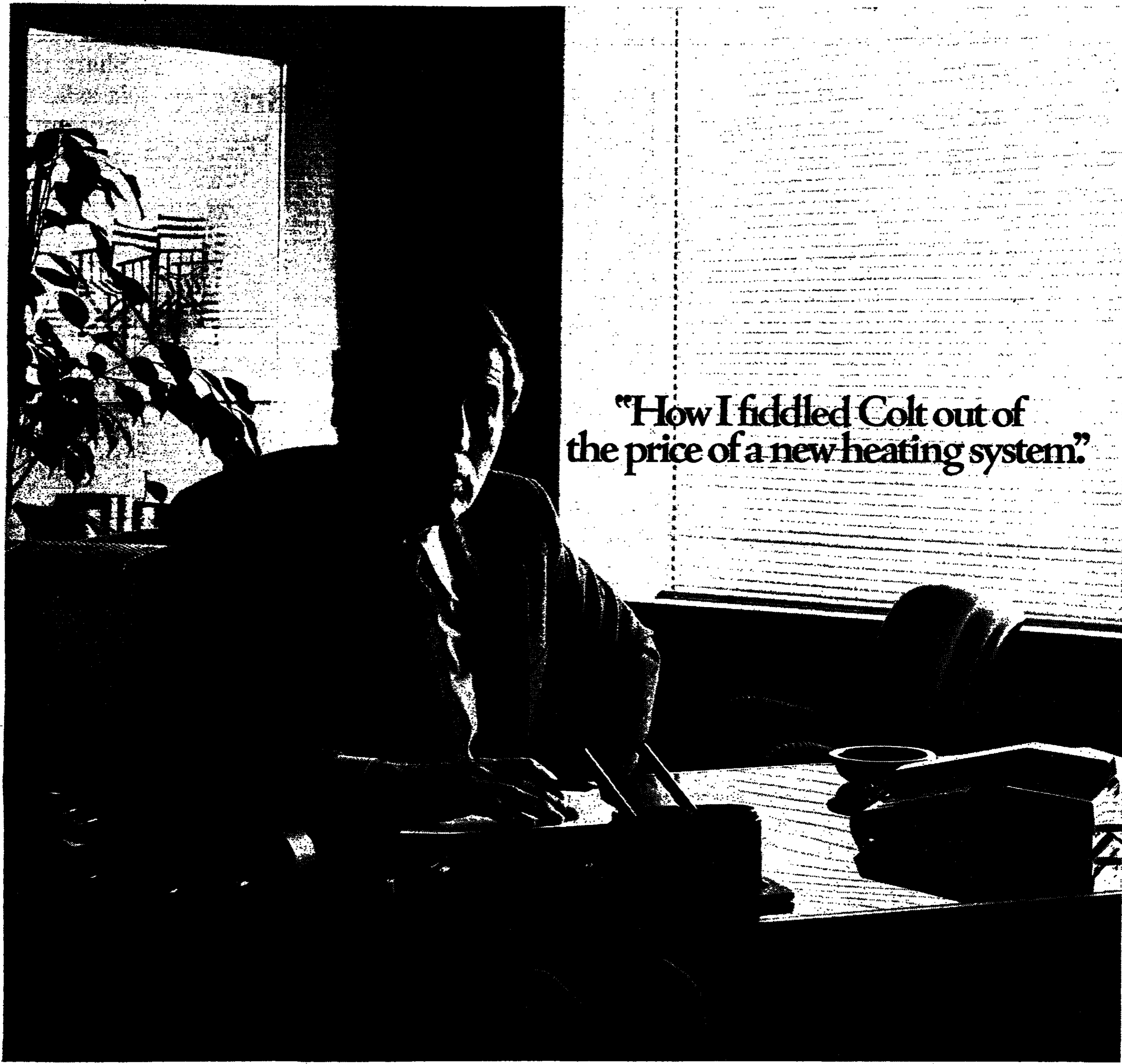
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"How I fiddled Colt out of
the price of a new heating system."

"Our old heating system had been in terminal decline for as long as anyone could remember.

But with the recession, and pressures on budgets, we always had to coax another season's use out of it.

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On top of which, a Colt system was reckoned to pay for itself, installation and all, in less than two years.

(In our case the payback period turned out to be about one second

flat! But I'm jumping ahead of myself.)

They offered to do a free, no obligation survey of the heating and ventilation system, then present us with their recommendations for the future.

We had nothing to lose and everything to gain, so I gave them a ring and suggested they take a look at things.

It wasn't long before I was staring at a set of figures predicting a 60% annual saving in fuel costs, guaranteed by Colt for at least ten years. And that was just the beginning.

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TECHNOLOGY

HOW HERTZ SAVES MONEY ON COMPUTING

Bureau business still blooms

BY ALAN CANE

HERTZ EUROPE, a significant part of the world's largest car rental group, was set to save money on its computing. The UK's largest computer services company, wanted to break into new markets.

The result was an elegant variation on the facilities management theme which is now saving Hertz, at a conservative estimate, more than £250,000 a year, and which has opened Scicon's door to the lucrative IBM bureau business.

Facilities management (FM) has become a speciality for some computer services organisations, notably Hoskyns, which claims more FM deals in the UK than any other company.

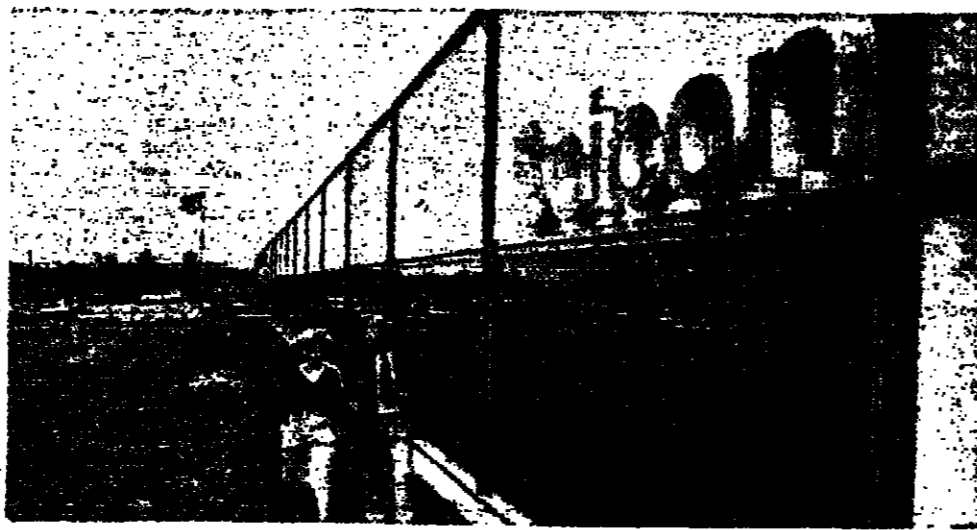
As practised by these companies, it usually means, for a fee, taking over the running of a client's computer centre. The computer remains the property of the client. Full responsibility for the computer and its performance rests with the computer services company.

The Hertz deal is quite different. The computer it is using — an IBM 4341 medium-sized mainframe — is owned by Scicon and operated from its Milton Keynes computer centre. The software which runs on the machine belongs to Hertz — written by the rental firm specifically for its own corporate needs.

Scicon is, in fact, managing Hertz's software facilities; in other respects the deal is a pure computer bureau operation — but at a fixed price.

What makes the deal of special interest is Hertz's size — its revenues were more than \$1.5bn in 1982 — its almost total dependence on computers and its sophistication in data processing.

Its director of management systems and services for Europe, Mr Jonathan Chapple, formerly management services director



for Thomas Cook, is one of the new breed of systems supremes who wears the hats of data processing director and telecommunications director simultaneously.

Its world-wide data processing centre in Oklahoma City houses two separate systems — an IBM operation for mass file storage and a Sperry operation for reservations. Two transatlantic lines run from the UK to Oklahoma City; the group is thinking of installing a third to reduce its vulnerability to system failure.

The company already makes extensive use of external computers. Modelling and analysis work is carried out on an Amdahl mainframe owned by the U.S. bureau NCSS. And monthly results from Hertz world-wide subsidiaries are consolidated over the Geisec Mark III computer network.

In Europe, the company operates a distributed computing system. Central accounting is handled by the Scicon IBM, each country has its own Texas Instruments minicomputers to carry out local processing.

The complication is that customers for car rental are billed in their country of origin, which means that the country subsidiaries have to operate a system called Euroswap — European debt swapping to reconcile their financial differences.

Why does Hertz need the central IBM? It has files on some 70,000 customers in Europe held on the 4341 and used to keep the U.S. customer

file — with its 8m individual records — up to date. It also handles centralised customer accounting — the heart of the Euroswap operation — and so runs the local receivables system for Hertz.

Mr Chapple says: "The name of the game is receivables control. This is what it is all about. If you do it well, you are well ahead — do it badly, and you are dead."

Hertz used to use a bureau service from BOC Datasolve as it was then (it has since been taken over by Thorn EMI). The problem was how to keep a lid on costs as volume of transactions expanded.

At the same time, Scicon, which had operated a bureau business based on Sperry machines for many years was looking for a way into the IBM market place — where most of the UK's bureau business is to be found.

It offered Hertz dedicated use of an IBM 4341 for a fixed fee of about £300,000 a year if the rental company would allow it to use and sell extra capacity on a bureau basis.

Why did Hertz accept? First, the price, Mr Chapple points out: "It is simply very cost-effective. We are paying about half the cost of the other service for unlimited use of the machine."

Second, it frees Mr Chapple and his (quite small) team from the chores of day to day operations management to concentrate on strategic issues and planning.

"This philosophy at Hertz is

that resources should be channelled into getting the systems right and planning for the future. That is a full-time job without all the hassle of running a computer centre."

Third, it offers security which Hertz could not have provided without major changes. Scicon operates all the security measures expected of a large bureau including protection against lost or misused files through to defences against terrorism.

And fourth, it fitted Hertz's data processing strategy. Usually these days, the company is centralising, bringing applications that are presently running on the country IT units back onto the mainframe, starting with France, Hertz's first subsidiary in Europe.

"We decided to distribute mini computer power in 1978," Mr Chapple says. "When IBM launched the 4300 series it knocked such holes in the arguments for distributed processing that we decided to think again."

But there is still a need for local processing when the customer brings the car back and wants to see an itemised bill.

Hertz uses small Olivetti TC800 microcomputers in a system called Autocheck which assimilates the rental agreement, adds the rental data and computes the final bill — all on a video screen so the customer can check every detail. Eventually these will be used to put transaction details directly into the system.

VIDEO AND FILM BY JOHN CHITTOCK

Soccer vandals look to TV

IF TOP league soccer vanishes from British television screens on Saturdays and moves on to the video screens of pubs on Mondays — now a prospect — the football hooligans will have a new way of inflicting damage. The screens used in many video projects are usually finished with a metallised surface, highly susceptible to handling. Even conventional silver painted screens are not resistant to beer slops, and cinema managers all over the country can testify that the silver screen is a favourite target for all kinds of unsavoury missiles.

The closer proximity of a video screen in a pub will provide an inescapable temptation, no doubt. But if that is not problem enough, the screen-makers are forever conducting their own technical battle in improving the performance of screens.

An efficient cinema or video screen needs to be much more sophisticated than a white bed sheet suspended at the corners. Not only must it be free of wrinkles — which on the span of 100 ft found in at least one of the world's cinemas poses quite an engineering problem; it must be also a highly efficient reflector returning to the audience as much as possible of the original light from the projector.

Yet "reflector" is hardly the right word, because the screen surface must also diffuse the incident light in order to form an image, and disperse its light evenly so that every viewer in the audience sees a picture free of hot spots or dark corners.

With video screens there are additional problems. Most video projection systems use three separate images — red, green and blue — which converge in register on the screen to yield a full colour picture. If the geometry of the screen is not carefully matched to the installation, variations in registration may occur — causing colour fringing.

Video projection and the daylight use of tape/slide programmes has boosted activity in the development of screen technology. What everyone wants, of course, is a screen that will reflect back — evenly at all viewing angles — all of the light that the projector is throwing on it; but, at the same time, the screen must not reflect back ambient lighting from the rest of the room (a miracle achieved in some measure by using tinted

materials for the screen and highly directional reflecting surfaces).

Screen-makers thus have an extraordinarily difficult balancing act to perform. It is rather gratifying to put on the record that one of the world leaders in a British company — Harkness Screens — who are probably the biggest suppliers of cinema screens worldwide. From white painted screens to silver screens the company progressed in the past 50 years, to developing the Perlux plastic screen — with gain (viz. light collecting efficiency) comparable to a silver screen but without the severe fall off in brightness at oblique viewing angles that occurs with silver.

Problem

Recent activity in the cinema, however, has posed a problem for the Perlux screen. It is that word 3D again. The conventionally used system of 3D cinema projection is now undergoing a revival — relies on polarised light from the projectors (and Polaroid viewing spectacles). But the plastic surface of a Perlux screen has the unfortunate effect of depolarising the incident light from the projectors, so that cinemas using 3D must now install metallised (e.g. silver) screens.

Harkness have recently developed a new silver screen for this purpose. Spectral 2000, which they claim has the gain and angular characteristics of Perlux. This screen makes its own premiere on Friday May 13 in London at the premiere of the new film Friday 13th Part III.

An even bigger premiere for Harkness occurs in June with the opening of the National Museum of Photography, Film and Television in Bradford. This exciting venture will provide Britain not only with its first integrated showplace for the media, but also its first Imax installation.

Imax system

From Canada, Imax is the spectacular film projection system first seen at the Osaka Expo in 1970. It uses 70 mm wide film not uncommon to commercial cinemas, but in an horizontal configuration so that the frame size that is both higher and wider. The Imax projector likewise runs the film horizontally, thus yielding bigger, brighter and sharper pictures

than ever before experienced in the conventional cinema.

For Harkness, Imax has been good business, providing a demand for massive screens in specially built auditoria. The Bradford installation is a little smaller than many — 62 ft wide by 45 ft high. On raked seating, this will almost envelop the audience with a cinematic experience that makes dim, fuzzy video projection seem very crude indeed.

The problem with video projection is that, however efficient the screens, they can never provide a picture brighter than the original light source in the projector. In most video systems, this light source is a cathode ray tube — as in a domestic TV set — and cathode ray tubes have severe limitations on how hard they can be driven to yield brighter pictures (the picture quality also suffers in consequence and the level of X-radiation can rise to unacceptable levels).

Better design

It is probable that no more efficiency can be squeezed out of the video screen, and the only scope for improvement is in the design of the actual projectors. The superb Eidophor, which costs more to buy than a small fleet of Rolls-Royces, long ago showed one answer by abandoning the cathode ray tube — using instead a very elaborate liquid refracting system, controlled by the TV signal, to modulate high intensity light sources.

This Swiss system could be challenged soon by a small British company — Dwight Cavendish — who have developed a video projection system based on the modulation of a laser beam. A single ion laser passes through a three-way beam splitter — where each path is separately modulated and coloured with the appropriate red, green and blue signals — before recombining as a single, full colour beam.

This beam is projected on to the screen, at appropriate intensity, in a scanning pattern which reconstructs the original TV picture. The system could promise very bright, high resolution pictures so that video projection can at last seriously compete with the film projector. No doubt it will stimulate new ideas for screen surfaces — so the future for companies like Harkness could be bright, big, wide and silver-lined.

Sawing

Wood cutting

FORESTOR, the Hampshire company specialising in the design and manufacture of equipment for wood cutting, has designed a tractor mounted sawbench for ripping or cross cutting logs. Details of the unit which costs \$619.50, are available from the company at Elmwood Lane, Hants (RG2562 2260).

Printer

Electrostatic plotter

VERSATEC, a Xerox subsidiary, has launched a full colour electrostatic plotter which it says is the first of its kind in the world.

Aimed at the computer graphics market the new model can produce a full colour A4 size drawing in eight minutes, or a black and white plot in less than 90 seconds. The resolution of the system is 40,000 points per square inch. More on 0635 42421.

Magnetics

High density data cartridge

DATA ELECTRONICS' 4 in magnetic tape data cartridge capable of high density 6400 bit per inch recording is now available from CPU Peripherals based at Slough, Middlesex. The model 30007 has a capacity of more than 17 megabytes of data and is aimed at the small business and data acquisition market.

The company says that it is the first fully tested and certified 4 in cartridge on the market. More information of the system is available from Walton on Thames 46433.

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David Vaughan



The other new work this season was *Coast Zone*, the latest in Cunningham's works originally choreographed for the camera in collaboration with the director Charles Atlas and then adapted for the stage. The film version reportedly makes extensive use of close-

This is one of those works of Cunningham's that do not yield up all their secrets at the first or even the second viewing, whereas the impact of *Quartet* is immediately felt and overwhelming.

Jeunesse Doré



Published in 1872, his reporting there of the London poor is more than Dickensian, providing the visual imagery for Mayhew's *London Labour and the London Poor* of twenty years earlier, and, by way of so-called "Pilgrimage," in astonishing contrast to the crisp, clean and elegant topographical illustrations of London, as in the work of Shuter Ross.

On the other hand, I find it difficult to contemplate without wincing Doré's excursions into sculpture as represented in this show. If technically virtuosic works, they are perversely ingenious, and the figure of the knight, full armour going to the dog over a rotting and putrefying horse, is a masterpiece – whatever its origins in Rabelais – compels memorised horror. One aspect though that the original drawings set right in comparison with engravings based on them, is the impression, given in engravings that the figures are caricatures of young women, all so supple and virginal, all so supple and virginal. A watercolour sketch of two of them in an open crotch

Generally, such a comparison seems not very relevant. Doré was not a satirist, nor does he rival the ferocity of Daumier's line, while his *Don Quixote* seems stagey when one remembers the bleak elemental intensity of Daumier's appartions of Cervantes' hero. On the other hand, Doré had, in his variety, admirable talents that Daumier did not possess. While Hazlitt's show is very rich in the monochrome studies for

have been painted for a panoramic view of the city from the tower's observation deck, and indeed are part of a breakfast room. But perhaps the most noteworthy expression of socialist realism is the circular chandelier hanging over the bar, which depicts the sun rising over the horizon, symbolizing the dawn of a new era.

The exhibition is open from 10 a.m. to 6 p.m., Monday through Saturday. Admission is free. The exhibition is located at the National Museum of Modern Art, 1000 Independence Avenue, S.W., Washington, D.C. 20540.

Further information about this exhibition, incorporating much of this showing, are planned for later in the year at Strassburg (Mr.'s home town) and Pottery.

The Don Pasquale revival, with Geraint Evans in the title role, shows off two of London's most attractive

Antony Thornicroft

Stuttgart Württembergisches Staatstheater: Stuttgart's Der Fliegende Holländer with Tom Kraemer in the title role.

Volksoper (54324/2857): Der Graf von
Luxemburg, Das Feuerwerk, Die

block in the catalogue. There may be too, in such studies, a

6 Insect that starts attacking

young women are all soporifically vapid. A watercolour sketch of

translator still to be of use
(5)
25 Done really well partly by

Hazlitt's show is very rich in the manuscripts studied for

YARD ARM BRAILLE
EX R A S R F

later in the year at Strasbourg (Dorff's home town) and Paris.

Allen, Financial Times, 75 Rockefeller Plaza, New York, N.Y. 10019; Telephone 489-8300; Telex 238409

PARIS

The Don Pasquale revival, with Geraint Evans in the title role, shows off two of today's most attractive

Stuttgart Württembergisches Staatstheater. Stuttgart's *Der Fliegende Holländer* with Toni Kraemer in the

Volksoper (54324/2857): Der Graf von
Luxemburg, Das Feuerwerk, Die

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*

Volksoper (54324/2857): Der Graf von
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Left to right: Stephen J. Ruffi, Executive Vice President, T. Mitchell Ford, Chairman and President, William C. Lichtenfels, Executive Vice President

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Statement Mission	T. Mitchell Ford, Chairman and President Emhart Corporation c/o Peter Muccini-Brooker, Gordon Partnership 83 George Street London, W1H 5PL England
NAME	Dear Mr. Ford:
ORGANIZATION NAME	Please send me a copy of your Statement of Mission.
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INTL. COMPANIES

Trafalgar Housing warning prompts share suspension

BY ANDREW FISHER IN HONG KONG

SHARES WERE suspended yesterday in Trafalgar Housing, the Hong Kong group involved in property, mining and fish farming, after it said there would be no profit for the year just ended because of unspecified financial provisions.

The company, not connected with Trafalgar House of the UK, is also omitting its latest preference and interim ordinary dividends at an estimated saving of HK\$25m (U.S.\$3.72m).

Trading in the shares, which have fallen sharply in price over the last two years and are also quoted in Luxembourg, will resume tomorrow. Last night, the company said it had assured local stock exchange authorities that its net worth was not negative.

One of the group's most recent projects involves flats in neighbouring Macao. Hong Kong citizens have been invited to buy these with the prospect of also having the right to live in Portugal.

Doubts have arisen over whether the scheme will finally go through. Trafalgar Housing also has interests in U.S. oil wells and gold mine developments in California and Nevada, as well as other Hong Kong and Chinese property projects.

The company declined yesterday to state the size and nature of the 1982-83 financial provisions or to give any idea of results for the year. In 1981-82, net profits rose from HK\$147m to HK\$170m.

The Trafalgar shares were suspended at HK\$1.04, having been near HK\$6 in 1980 and 1981. It is believed the suspension was matched on the Luxembourg exchange, where the listing was sponsored in 1981 by Kreditbank.

Stock market sources said the size and range of the company's development commitments, along with the relative lack of earnings, had led them to expect news of Trafalgar's problems for some time.

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BIRMINGHAM (WEST)	28.18.13	LONDON	58.38.88	PARIS	05.29.08
BUSSESSA	218.60.88	LONDON	528.32.51	SINGAPORE	338.08.08
COPENHAGEN	04.30.08	LUXEMBOURG	56.09.29	STOCKHOLM	21.77.27
DUBLIN	22.51.75	LUXEMBOURG	48.45.58	STUTTGART	22.03.13
FRANKFURT	28.28.91	MADRID	40.21.21	VIENNA	54.11.88
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Scrip issue for Straits Trading

By George Lee in Singapore

STRAITS Trading, the major Singapore tin and investment group, is making a bonus scrip issue of two new shares for every 10 held which will raise its issued capital to S\$ 216m (U.S. \$102.8m).

The scrip issue follows the group's disclosure of a lacklustre performance for the year ended December 1982.

Group pre-tax profit went down by 9 per cent to S\$ 53m, but a sharp reduction in the tax charge by 33 per cent to S\$ 15.7m managed to lift group after-tax profit higher by 7 per cent to S\$ 37.3m. Group turnover declined by 3 per cent to S\$ 908m.

No reason was given for the poorer performance but it appears that the group has been hit by the problems besetting the tin industry in Malaysia—lower prices and demand and production quotas.

The group reported an extraordinary gain of S\$ 39.1m compared with S\$ 71.8m in 1981.

Straits Trading has proposed a second interim gross dividend of S\$ 0.14 per share, making a total of S\$ 0.20 for the full year.

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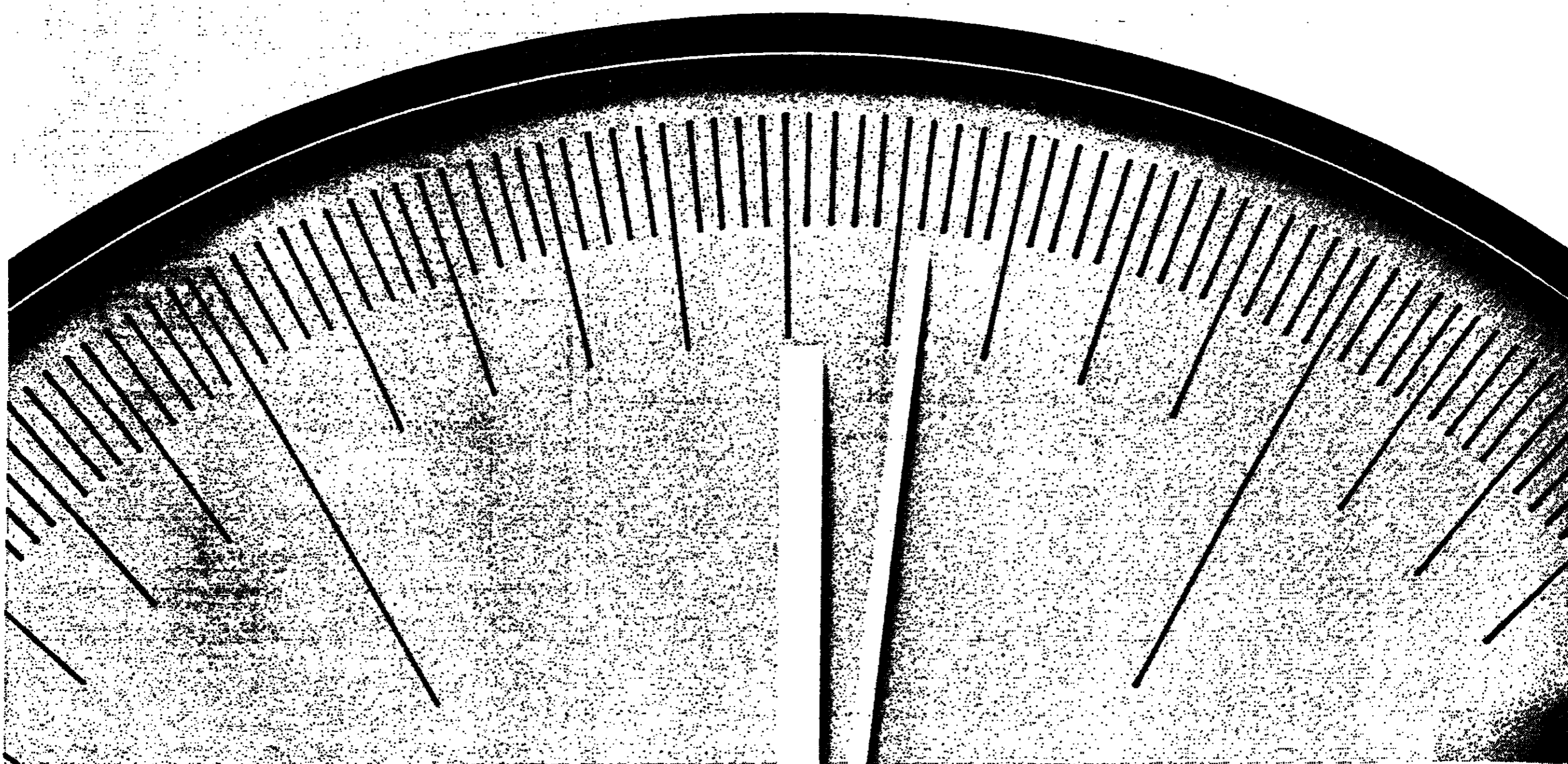
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UK COMPANY NEWS

Queens Moat Houses beats its forecast with £2.78m

RECORD PRE-TAX profits, up from £1.03m to £2.78m, are reported by Queens Moat Houses for 1982, and the figure comfortably beats the forecast of £2.5m made at the time of the group's acquisition of 26 hotels from Grand Metropolitan in April, last year.

Queens Moat thus doubled its chain of hotels. It also acquired the Copdock International Hotel in Ipswich, and early this year acquired the Drury Lane Hotel in London. The group now operates 50 hotels, totalling 3,656 bedrooms, together with five public houses/restaurants. It is the board's intention to make further acquisitions, if appropriate, and to expand and improve the portfolio of properties.

Group turnover in 1982 soared from £15.41m to £38.15m. Trading profits, before rent and interest payable, were £4.4m against £2.84m. Rent cost £2.54m, compared with £2.58m, and interest charges were £2.96m (£1.25m).

After tax of £2.78m (£1.03m), attributable profits climbed from £2.04m to £2.55m. The final dividend is raised from 0.55p to 0.80p per share, a total of 1.11p. Stated earnings per share increased from 2.54p to 3.21p.

BOARD MEETINGS

The following companies have notified dates of board meetings to the Stock Exchange. Such meetings are usually held for the purpose of considering dividends. Such indications are not available as to whether the dividends are in pounds or shillings and the sub-divisions shown below are based mainly on last year's results.

Comment: Over the last 12 months Queens Moat Houses has increased the number of its hotels from 23 to 50 and boosted its workforce from about 1,400 to 3,150 today. But earnings per share have risen despite the dilution caused by the rights issue last May which financed the £30m acquisition of 26 hotels from Grand Metropolitan. Borrowings, however, are now also high, amounting to 90 per cent of shareholders' funds, or 60 per cent if the convertible loan stock (with options starting next month) is considered deferred equity. But all the loans are at floating rates and not callable

FUTURE DATES

Investment: Anglo American Coal May 18
Portland Holdings Apr. 11
Woodworth Holdings Apr. 11
Finals: Anglo American Invest. Trust Apr. 14
RSC International Apr. 14
Banford Concrete Machinery Apr. 14
Bentalls Apr. 19
Dunlop (Wooler) & Goodrich Apr. 19
Highland Electronics Apr. 19
Innospec Holdings Apr. 19
Lac Refrigeration Apr. 29
Liberty Apr. 29
Lilly (F.A.) Apr. 29
Midland Industries Apr. 29
Tabery Group Apr. 29

Canadian setback hits Barton Gp. at year-end

THE EXPECTED downturn in year-end figures at Barton Group has been borne out with pre-tax profits falling from £1.03m to £400,000, which included second half profits of £344,000 against £372,000.

The final dividend is unchanged at 1.4p net for a same-again total of 2.4p.

Turnover of this holding company with interests in tubing and foundry, industrial services and engineering, fell from £40.27m to £47.57m, and trading profits were lower at £1.38m compared with £2.15m.

The directors say that UK trading profit was similar to that achieved in the previous year, but that the unparalleled recession in Canada has gravely affected overseas figures, where there were losses of £278,000 against profits of £402,000. There are now distinct signs, however, of improvement in Canada.

The pre-tax figure was after interest charges of £1.01m (£1.11m) and associates profits £28,000 (£4,000 loss). There was a tax credit of £288,000 (debit £208,000).

There were extraordinary debits of £1.69m (£703,000), which comprise the cost of closures and major restructuring.

Stated earnings per share fell from 3.37p to 2.72p.

James Halstead jumps by 68%

A JUMP of 68 per cent in pre-tax profits from £612,572 to £1,030m has been shown by James Halstead Group for the half year to the end of 1982. The accounts include a loss of about £200,000 from Averoy Travel, which the directors say was anticipated.

The interim dividend has been effectively lifted by 25 per cent. After earnings per 10p share were given as rising from an adjusted 2.85p to 4.71p, the net interim dividend has been declared at 1.25p, which is equivalent to a rise of 25 per cent after taking into account a one-for-four scrip issue last year.

In the last full year pre-tax profits amounted to £1.38m on turnover of £22.02m, and the total payout was equivalent to 2.4p.

For the half year under review turnover of this maker of PVC floor coverings, leisure products and waterproof clothing moved ahead from £9.48m to £12.91m.

On February 4 this year the company acquired the car-camping business of Wigwam International Holidays for an initial sum of £300,000. The directors say the activities of this subsidiary will be reviewed in the annual report.

At the trading level profits for the six months rose from £797,485 to £1,355m which were subject to depreciation of £203,882 (£143,551), debenture interest of £8,206 (£13,645), and

bank interest £44,868 (£27,714). Tax amounted to £388,891 (£223,964). There were extraordinary debits of £10,839 (£22,046) after which attributable profits emerged ahead from £385,943 to £635,078.

comment

Measures taken in 1981 have clearly put Halstead back on to a growth path. Productivity gains are coming through and 800 jobs remains the main contributor to profit—around two-thirds in 1982.

Retail flooring, which recovered to break even during last year, is looking healthier helped by the withdrawal of Dunlop from the scene. The problems at Averoy are not likely to be helped by the depressed state of the overall travel market but with late booking becoming more a feature of the trade, particularly for small operators, the true picture will not be obvious until year end. With only fine tuning left for productivity the group will have to look to volume gains and price increases in the second half. But the company's confidence must be encouraged by the relatively stable raw material costs. Balance sheet remains strong with only minimal gearing leaving the way open for a major acquisition. But without this, approaching £3m pre-tax appears well within reach. Yesterday shares rose 4p to 97p for a prospective p/e over 9.

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Specialising in Smaller Company Investments since 1962

Year ended 31st January 1983
Dividend: 6.30p per share +5.0%
Net Asset Value: 182.5p per share +36.4%
FT Actuaries All-Share Index +19.4%
Total Assets: £8,028,285

Performance since 1962
Net Asset Value +973%
FT Actuaries All-Share Index +337%
Dividends +889%
Retail Price Index +516%

KBIM

Managers:
Kleinwort Benson
Investment Management

Copies of the Annual Report are available from The Secretaries, 20 Fenchurch Street, London EC3P 3DB

Bryant Holdings lower midway

FIRST HALF pre-tax profits of Bryant Holdings fell from £4.81m to £3.47m, the reduction reflecting a decrease in margins on private housing and additional finance charges on increased bank borrowings.

The net interim dividend for the half year, covering the period to end November, 1982, is being effectively increased from 0.5p to 0.55p per share—a final equal to 1.5p was paid for 1981/82.

Turnover declined from £44m to £41m—the group's interests are in property investment, home and property development and construction.

Stated earnings per share emerged at 3.2p (3.7p) after tax of £214,000, against £15m previously.

comment

Bryant's diversification away from the West Midlands into the leafy suburbs and villages of Berkshire, Surrey and North Hampshire which was started three years ago has been a vital prop to its earnings during the recession. But the company has not yet had time to develop sub-urban relationships with the local authority planners in the South-East and this year's building programme has been

held up by lengthy wrangles over time buyers' market.

Most of the first three months of 1983, all profits from the South-East, though it is the price of smaller units in the West Midlands which have shown the sharpest increase, Bryant has benefited from rises of 3 to 4 per cent in the prices of the units it sells there, which will improve severely-squeezed margins. Borrowings remain low at only 16 per cent of shareholders' funds.

The share price yesterday fell 10p to 66p, 14.5 times the prospective fully-taxed earnings.

Fitch & Co. better than expected at £875,000

BETTER THAN forecast profits of £875,000 before tax have been produced by Fitch & Company Design Consultants for 1982. At the time of the company's placing on the USM last October, a forecast of £850,000 was made. The full year figure compares with a previous £707,000.

The net final dividend has been declared, as forecast, at 2.5p. The dividend was £138,000, which left lower retained profits of £211,000 compared with £330,000.

The company is well-placed for continuing steady consistent growth, say the directors.

Turnover improved from £3.51m to £4m.

Tax amounted to £428,000 against £377,000. Minority interests took £3,000 (nil), and there were extraordinary costs this time of £91,000 which related to the costs of entry to the USM. The total absorbed by the first dividend was £138,000, which left lower retained profits of £211,000 compared with £330,000.

Annual Report 1982.

In a difficult year, our figures only tell you half the story.

HALF THE STORY.

£M	1982	1981
Premium Income	1,358	1,157
Underwriting Losses	153.8	52.9
Investment Income	195.5	156.9
Pre-Tax Profit	44.5	104.9
Tax	(9.1)	31.7
Attributable Profit	53.6	73.2
Earnings per Share	31.3p	43.7p

THE OTHER HALF

RESERVES

Exchange rate movements added to the sterling measure of our net assets overseas and, together with favourable developments in investment values, combined to produce total surplus funds of £923 million and a world-wide solvency margin of 75%—a clear demonstration of the strength of our financial resources and the security this gives to all our policyholders.

DIVIDEND

The Board are recommending a final dividend of 9.5p per share, making a total of 17p per share, an increase of 4.6%. Despite the earnings decline, the Board consider some small dividend progression justified by a cover of 1.8 times.

CLAIMS

Our exceptional underwriting losses in the UK highlighted the extent of the insurance protection we provided for our policyholders, both private and commercial, during perhaps the worst winter in living memory. But we believe it is to give just this kind of support that we are in business.

LIFE ASSURANCE

I am pleased to record outstanding results for new individual business in 1982, with increases in both sums assured and premiums well above market average. The figures were boosted by more attractive premium rates for non-smokers, a new bonus series and the first Plain-English life policy in the UK.

MANAGEMENT

As I travel both at home and overseas, I am encouraged to see the skill and dedication of a new generation of management moving into positions of leadership within the Corporation. It is in their hands that our future prosperity will lie.

NEW TECHNOLOGY

Investment in new technology proceeds and although the full benefits remain to be reaped in future years we are already seeing welcome returns in several areas of our operations.

THE WAY AHEAD

I take most comfort from the indications of an incipient economic recovery in the United States. If this is encouraged to gather pace and leads to an end to the long recession elsewhere, then we can begin to hope for an increase in the demand for insurance and some easing of competitive pressures induced by over-capacity.

In the meantime we must resolve that our share of a market still contracting is not defended at any cost.

From the Annual Statement by the Chairman, Mr. Gordon R. Simpson.

General Accident

General Accident Fire & Life Assurance Corporation plc.
World Headquarters, General Buildings, Perth, Scotland PH1 5TP.

The complete story of how we did in 1982 is included in our Annual Report for the year. A copy can be obtained by writing to the Secretary at the address above

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£1,250,000 Ordinary Shares of 10p each £1,110,000

In connection with a Placing of 4,700,000 New Ordinary Shares of 10p each at 36p per share by Smith Keen Cutler, application has been made to the Council of The Stock Exchange for the grant of permission for dealings to take place in the whole of the issued ordinary share capital of Yorkgreen Investments PLC in the Unlisted Securities Market. It is emphasised that no application has been made for these securities to be admitted to listing. Shares have been offered to and are available through the Market.

Particulars relating to the Company are available in the External Statistical Services and copies of the prospectus may be obtained during normal business hours on any weekday (Saturdays excepted) up to and including 26th April, 1983 from:-

SMITH KEEN CUTLER

52 Cornhill, London EC3V 3NR Exchange Buildings, Stephenson Place, Birmingham B2 4NN

Notice of Redemption

Monsanto International Finance N.V.

5% Guaranteed Sinking Fund Debentures due May 15, 1983

NOTICE IS HEREBY GIVEN that, pursuant to the provisions of the Indenture dated as of May 1, 1970 under which the above described Debentures were issued, Citibank, N.A. (formerly First National City Bank), as Trustee, is calling for redemption on May 15, 1983, through the operation of the Sinking Fund, provided for in said Indenture, all outstanding Debentures of the said issue.

The Debentures specified above are to be redeemed for the said Sinking Fund at Citibank, N.A., Receive and Deliver Department—34th Floor, 111 Wall Street, The City of New York, State of New York, and the main offices of Citibank, N.A. (formerly First National City Bank) in Amsterdam, Brussels, Frankfurt/Main, London (City Office), Milan, Paris, Rome, or Citibank (Luxembourg) S.A., Luxembourg, as the Company's paying agents, and will become due and payable on May 15, 1983 at the redemption price of 100 percent of the principal amount thereof plus accrued interest on said principal amount to such date. On and after said date, interest on the said Debentures will cease to accrue.

The said Debentures should be presented and surrendered at the offices set forth in the preceding paragraph on the said redemption date with all interest coupons maturing subsequent to the redemption date. Coupons due May 15, 1983 should be detached and presented for payment in the usual manner.

For MONSANTO INTERNATIONAL N.V.
By CITIBANK, N.A. (formerly First National City Bank),
Trustee

April 12, 1983

Hambros Fd. Mgrs. (C.I.) Ltd. P.O. Box 84, Gurnsey Capital Reserve Fund 136 13 16.19 Cash Fund 136 13 16.19 Special Svc. Fund 136 13 16.19 Income Fund 136 13 16.19 Dividend Income Fund 136 13 16.19		Quilter/Henric Commodities 31-45, Gresham Street, EC2V 7LN. 01-600 4177 Rev'd Fd Int April 5, 1957 71 3304 1.92 Next dealing date May 5. See Investors (Isle of Man) Ltd See Commodities Page 1004-FH and	
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100000	100000	0.60
Assicurazioni GENERALI S.A.		
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Swire Macao Finance Co.	1137	144.56
1137	1137	144.56
Graville Investment Limited		
P.O. Box 73, St. Helier, Jersey		0534 72913
Graville Inc.	1137	9.57
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Grindlays Investment Mngt. Ltd.		1 542
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Managed Fund	101027	11 037.9
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Guinness Mahon Int. Fund (Guinness)		
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US\$ PRF	1200	16.00
1200	1200	16.00
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Prices at Mar 31, Next dividend Apr 14		
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2110, Connaught Centre, Hong Kong		
For Enquiries, Tel 2552		25.52
Japan Fund Inc.	1511	38.99
1511	1511	38.99

Normandy Cons. Tel.	£1,371.00	1,862.42	6.00	W
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Northgate Unit Trl. Mgrs. (Jersey) Ltd.					W
P.O. Box 82, St. Helier, Jersey		0534 737.41			W
Pacific Fd. April 6	£9.99	10.76	1 --	4W
Pacific Basin Fund					W
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NAV	£15.99				1 --
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See Currency Part Main-Fri and					

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MAN Tst April 7	133.93	34.27	—
lected May April 7	133.69	34.77	2.49
Farley Investment Services Ltd.,			
11 Floor, Hutchison House, Hong Kong			
Farley Trust	1035.02	34.26	3.36
Farley Naimo At. Fd	1035.04	30.7	2.36
Farley Bond Trust	1035.1	21.77	0.20
Farley Japan Trust	1030.21	20.94	0.86
FestAven Sees (Guernsey) Ltd			
20 Box 214, St Peter Port, Guernsey 0481 2776/8			
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NEW YORK STOCK EXCHANGE COMPOSITE PRICES

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Robert Guy of Rothschilds will chair the first day and give the Opening Address. The speaker platform will be as authoritative as at previous meetings in this well-regarded series.

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Continued on Page 31

Prices at 3pm, April 11Continued on Page 32

Continued on Page 32

Continued on Page 32

Sales figures are unofficial. Yearly highs and lows reflect the previous 50 weeks plus the current week, but not the latest trading day. Where a split or stock dividend amounted to 25 per cent or more has been paid, the year's high-low range and dividends are shown for the new stock only. Unless otherwise indicated, dividends are annual disbursements based on the latest declaration.

a-dividend also extra(e), b-annual rate of dividend plus stock dividend c-aquadrating dividend, old-called d-New yearly low e-dividend declared or paid in preceding 12 months g-offered in Canadian funds, subject to 15% non-residence tax h-new issue i-plus split j-non-split k-quarterly dividend l-dividend paid this year, omitted, deferred, or no action taken at latest dividend meeting m-dividend declared or paid this year, n-accounting issue y-dividends in arrears n-new issue in the current year o-outstanding shares p-prior to q-current dividend excluding next-day date payment, P/E-price-earnings ratio r-dividend declared or paid in preceding 12 months s-date of stock split t-stock split Dividends begins with date of split u-splits 1:1 v-splits other than 1:1 w-weighted average price x-dividend value on ex-dividend or ex-distribution date y-new yearly high, y-trading highest in w-bankruptcy or receivership or being reorganised under the Bankruptcy Act, or securities assumed by another company z-without warrants x-as-dividend or ex-rights, xds-as-distribution, xw-without warrants, y-as-dividend and sales in full, yd-yield, z-sales in full

FINANCIAL TIMES SURVEY

Commuter Aircraft and Air Services

Although the recession has severely affected world civil aircraft markets, commuter operations are surviving better than most other sectors. A world market of about 6,500 aircraft, worth about \$25bn, is forecast up to the year 2000

Strong growth ahead

By MICHAEL DONNE, Aerospace Correspondent

MOST PEOPLE are now familiar with the domestic and international operations of the major scheduled and charter passenger airlines, but throughout the world there is another rapidly growing sector of transport aviation, of which comparatively little is heard, but which is becoming increasingly significant.

Usually described as "commuter" aviation, this broadly represents that growing area of commercial air transport operations lying between the activities of the major airlines at one end of the scale, and the even wider arena of "general aviation" at the other (the latter in turn including business and executive flying, agricultural aviation, flying training, leisure flying and the vast range of other aeronautical activities).

The term "commuter" aviation is in some ways misleading. In its purest interpretation, it covers the provision of regular air services between small, local communities and larger centres where bigger airports, well served with long-haul domestic and international scheduled air services, are available — the so-called "hub and spoke" pattern.

But the concept is being increasingly widened. At the lower end of the scale, it includes services linking small communities many of which previously had no air services at all, called "local service" operations, and at the upper

end, operations over longer distances, often linking major centres and even sometimes rivaling the operations of bigger airlines, so that they effectively become "regional" operations.

The distinctions between "local service", "commuter" and "regional" operations are thus becoming increasingly blurred, and it is often difficult to differentiate between them. A more accurate description of all these operations, therefore, is "third-level" to distinguish them from the larger short-haul and long-haul domestic and international operations of the major airlines, and from the wider arena of "general aviation".

Spectacular

The development of this type of aviation has been most spectacular in the U.S. Over the period 1971-81, U.S. third-level airlines' traffic grew at an average annual rate of 15 per cent, compared with total U.S. scheduled airline growth of 5.8 per cent a year. Full figures for 1982 are not yet available, but the indications are that this growth pattern was maintained, with only a few exceptions.

The expansion has been especially significant since the deregulation of the U.S. domestic air transport industry, which created virtual freedom of entry for airlines of all kinds on to new routes.

Outside the U.S., the upsurge in this type of aviation has also been significant, if less dramatic. While it is estimated that about 95 per cent of last year's total of 785m scheduled service passengers worldwide were carried by about 200 major airlines in the 144 member-states of the International Civil Aviation Organisation, the remaining 5 per cent of the traffic, or about 38m passengers, was carried by upwards of 1,000 "third-level" operators.

Of these, about 300 are located in the U.S., operating alongside some 4,000 air taxi operators, with about 300 in Western Europe, with the rest scattered about the rest of the world. Many of these operators are very small, often with only one or two aircraft involved, while some are very large, especially in the U.S. But they are nevertheless performing a valuable service in bringing passenger and cargo transport to a wide cross-section of local communities which otherwise

might not have air services at all.

No matter how they may be described — "third-level", "commuter", "local service" or "regional" — all of these operations have several elements in common. They are short-haul in nature (up to about 200 to 300 miles). They mostly use small, twin-engine turbo-propeller powered aircraft, generally seating up to about 20 to 30 passengers a time (the official U.S. definition of a "commuter" carrier is one using aircraft seating fewer than 60 passengers or carrying less than 18,000 lbs of cargo on regularly scheduled operations).

They are all comparatively low-cost, no-frills, cheap-fare operations; and they are all capable of using the most simple, rugged airfields and other ground facilities, as well as those of more sophisticated airfields.

All these operations have become possible because of the development of a wide (and expanding) range of small, light twin-engine transport aircraft, ranging from about four to six seats upwards, but mostly in the 20-30 seater category, although there are some larger, 50-seaters such as the de Havill-



A BAe 146 four-engine jet flying over Sydney Harbour during a world demonstration tour. The largest of the commuter aircraft, the 146 nevertheless can land on semi-prepared airstrips with minimum ground facilities

land Canada Dash Seven.

Prospects for the growth of third-level air transport through the rest of this decade are considered good, especially in the U.S., Western Europe, Australasia, Canada, and Latin America, while the rapidly-developing economies of countries in South-East Asia are regarded as a particularly encouraging breeding ground for third-level aviation.

Trunk routes

Overall, the growth in this type of aviation is expected to produce a requirement for some 6,500 aircraft of the third-level variety by the end of this century, worth about \$25bn in current values.

In the UK, air services linking major cities in the provinces with each other and with London have existed for many years, for example on the trunk routes between London and Glasgow and Edinburgh, Manchester and Birmingham. The growth of commuter-style services on routes with less dense traffic has been a more recent development, but is now one of the more rapidly expanding elements in UK air transport. There are various reasons for

this. One is the rising cost of surface travel, whether by rail or car, coupled with unreliability on the railways (last year's rail strikes did much to encourage commuter air travel). Another is the increasing availability of aircraft much more suitable for short-distance air transport than some of the larger jet or even turbo-prop aircraft that have been used in the past.

On many occasions in the post-war history of UK internal air transport, short-haul inter-city air services have been started, only to founder because the traffic available on the routes has proved inadequate to enable large airlines to be operated economically.

The introduction of smaller,

20- to 30-seat turbo-prop aircraft such as the Short 330 and the Embraer Bandeirante, for example, have done much to revitalise some flagging UK inter-city air routes and stimulate the development of others. As the range of available types of aircraft widens, so does the scope for the introduction of new third-level air services, and by carefully tailoring the size of aircraft to the traffic available, it is now possible to be almost any air service to be run profitably.

Another factor behind the growth of third-level aviation in the UK has been the emerging demand by businessmen for cross-country links, as opposed to the customary trunk-route services. The tendency for

industries of all kinds to locate offices and factories in new development areas has helped to generate this demand, and although in some cases the evolution of cross-country air services has been slow, there is now strong evidence that this type of third-level aviation will grow.

Operators providing such services already include Air UK, Air Ecosse, Birmingham Executive Airways, British Island Airways, Brynmor Airways, Genair, Inter-City Airlines, Loganair, Manx Airlines and Metropolitan Airways, all of which can be described as "commuter" type operators.

In addition, however, there are some bigger scheduled operators of domestic and international regional air services, some of whose activities can also be fairly described as commuter operations, including British Caledonian, British Midland and Dan-Air.

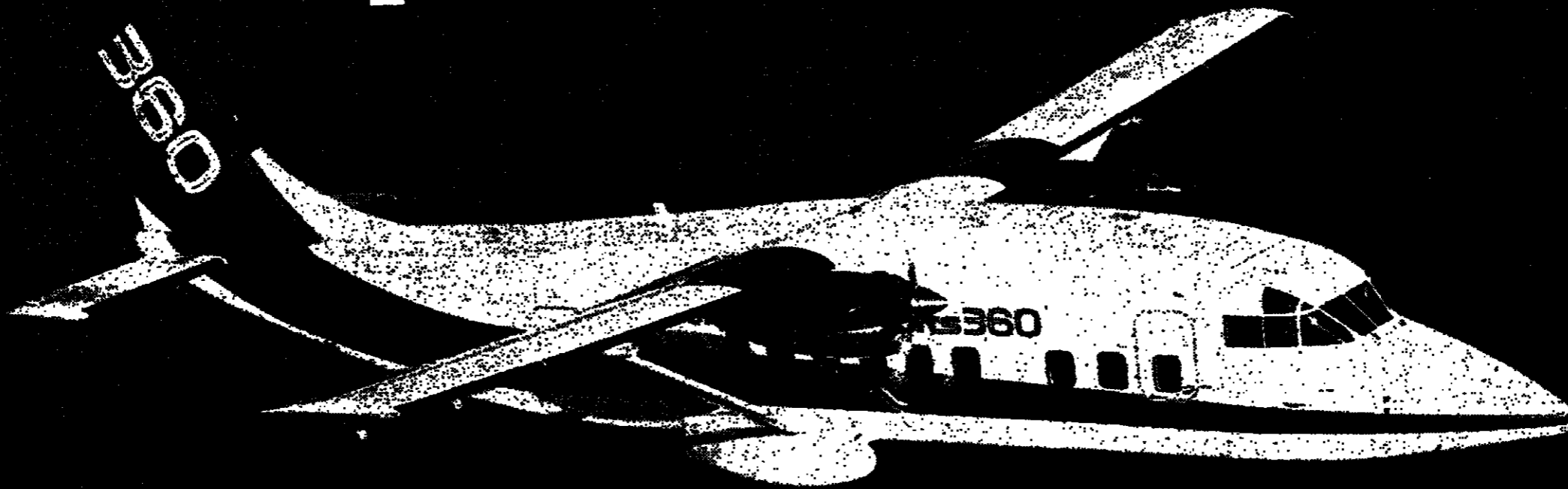
A more recent trend has been for some of the smaller commuter operators to join forces with larger, internationally scheduled airlines, so as to stimulate traffic growth by pro-

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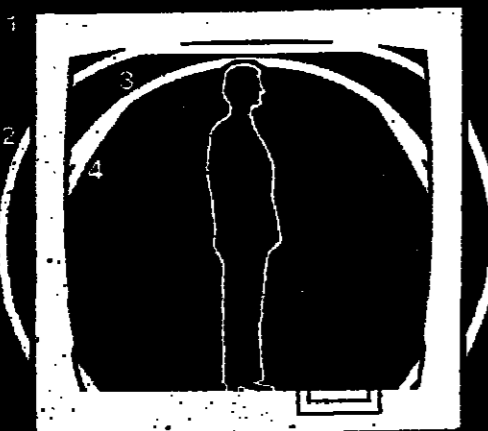
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Space Ship!



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COMMUTER AIRCRAFT II

Fuel cost rises behind U.S. expansion

COMMUTER AIRLINES in the U.S. are going through a period of rapid growth. In 1982, the number of passengers boarding commuter aircraft — defined broadly as those with 60 seats or less — jumped from 15.4m to 18.5m. That was double the level five years earlier.

This still represents a modest proportion of total airline passenger traffic in the U.S. — roughly 6 per cent — but the commuters are expected to increase their share of the market significantly over the next decade. The Federal Aviation Authority has projected 43m passengers by 1993 in this category, and there are those in the industry who think that this view is too conservative.

The main reason for this growth is that the major airlines have been suspending their services to small cities across the continent on a large scale. In the past 18 months alone, the jet airline operators have pulled out of 66 communities and this withdrawal by the bigger airlines — which looks likely to be a continuing process — has provided a major business opportunity.

What is not so clear is just why the majors have been abandoning services in this way. The obvious temptation is to link the trend to the deregulation of the U.S. airline industry, which occurred in 1978. Although the commuter airlines themselves were never regulated by the Civil Aeronautics Board, one of the major arguments presented by opponents of entry and exit freedom in the airline market was that small communities would lose air ser-

vices as a result of such a move. However, this pattern of route abandonment by the larger airlines extends back for a lot longer than five years. A Department of Transportation study in 1975 found that in the five years after 1970, certificated airlines had reduced the number of small cities they served by 14 per cent, and cut back flights on such routes by nearly a quarter.

So there is a more fundamental explanation for the shift to commuter services. Most markets serving small towns are short hauls, and rising fuel costs have made jet operators significantly less competitive on such routes compared to small commuter aircraft on ground transport.

For small turboprops, about three gallons of fuel is required per available seat for a 100 mile passenger flight; a small jet requires more than four gallons per available seat.

In practice, the differential is even greater. A recent study by the Civil Aeronautics Board's office of economic analysis argued that jets were simply too large to operate at high load factors in small markets. As an example, it said that if ten passengers were carried over the 100 mile route, the fuel used per passenger would be about six gallons in a 19-seat turboprop and about 45 gallons in a 110-seat jet.

In addition, the speed advantage of jets is not substantial on short-haul routes.

The conclusion is that a good number of the services which have been given up by the bigger carriers since 1978 would



The Saab-Fairchild 349 on initial flight testing. The withdrawal of thirty jets from many U.S. services has opened the market to new turbo-props

have gone even if deregulation had not occurred.

In addition, there have been important changes in the nature and scale of government subsidies for local air services. Subsidies in the biggest category, the so-called Section 406 subsidies, fell from \$94m in 1981 to \$44m in 1982. Appropriations for subsidies under this heading were reduced by about half for fiscal 1983 and were eliminated for fiscal 1984.

Impact

Overall, the CAB's office of economic analysis found that service to small communities had declined slightly as a result of all these economic and regulatory changes—but the impact had been by no means uniform.

In the towns where trunk and local airlines had dropped service, total departures had actually risen by 36 per cent—and this increased service had come entirely from the expanded use of commuter air-

craft. Jet service had declined by 90 per cent, while large propeller service was down by a half.

Despite the increase in volume, the commuter airlines and their suppliers did not escape the rigours of the recession in 1982. A number of marginal airlines have gone out of business, reducing the number of commuter aircraft operators in the U.S. from 277 in 1981 to 245 at the beginning of this year. Financial uncertainty combined with the overhang of capacity which followed a high level of sales in 1980 and 1981, has also put a nasty squeeze on some of the aircraft manufacturers in this field.

Yvich Industries, which claims to account for nearly a third of the worldwide fleet of 15 to 20 passenger commuter aircraft in service through its Metro series, delivered only 17 aircraft in this category in the U.S. last year, compared with 28 in 1981. The company bitterly, and unsuccessfully, pro-

tested against what it claimed was unfair trade competition from Embraer, the Brazilian manufacturer of the Bandeirante commuter aircraft.

However, Yvich remains convinced that there will be substantial growth in this sector of its business over the next decade, and believes that the recovery will get under way in the near future. It is also very optimistic about the prospects for its new 34-passenger 34-turboprop aircraft, which it is developing on a joint venture basis with Saab-Scania of Sweden. Deliveries are due to start in April next year, and there are firm orders for over 80 of these machines.

Fairchild is not alone in thinking that this will be a growth business. The Regional Airline Association believes that there could be a demand for between 1,200 to 1,500 commuter aircraft in the U.S. over the next decade.

Richard Lambert

Vital services transform developing countries

THE CONCEPT of "third-level" aviation takes on a different meaning outside the industrialised and more aviation-orientated countries of the West.

"Commuter" aviation as it is in the U.S. and Western Europe—linking small communities together and with larger cities and airports—is also growing rapidly in a number of countries, such as Japan, Australia and Brazil.

But in those countries, too, and in many other less well-developed nations, "third-level" aviation frequently ranks much higher in the scale of aviation operations.

While many of those countries may have flag airlines, with jet scheduled services and often also domestic services linking major towns or cities, beneath that level there is often a yawning gulf. To fill it what are described in the U.S. and Western Europe as "third-level" operations in fact become much more important.

Tours

In the developing countries the entire air transport infrastructure outside the major international airports (which themselves are often far removed from the marble, steel and glass extravaganzas found in the U.S. and Europe) tends to be proportionately much less developed. What may well be regarded in the West as "commuter" style aircraft, are often in the developing world the mainstay of the country's front-line air fleet, spearheading not only the country's technological progress, but in many ways also its economic and even social development.

In countries where surface transport is poor, or even non-existent, because of the terrain or climate difficulties, air transport is increasingly filling the communications role, opening up communities that for many centuries have been isolated. It is not only easier and quicker, but also considerably cheaper in terms of both initial capital and running costs, to build small airstrips in remote places to facilitate the use of small, short-take off and landing transport aircraft.

Thus, the emergence during the recent years of the growing range of such aircraft has not only substantially altered the scope of air transport in many industrial and economically

developed countries but has even more dramatically revolutionised the political, economic and sociological development of many poorer nations—and in both the changes are still taking place, and even gathering momentum.

This vital fact has not been lost upon the manufacturers. In some cases, manufacturers who originally designed and built their aircraft some years ago for the more sophisticated commuter-style environments of North America and Western Europe have been obliged to redesign them with additional features to make them more suitable for the more rugged environments of the developing world.

More recently, the growing inventory of aircraft types has included many designed specifically for use in the widest possible range of terrain and climates, from the Arctic to the tropics, while also being suitable for the commuter-style requirements of the North American and West European markets.

It is estimated, for example, that well over 60 per cent of all the light transports sold in recent years have gone to countries of the developing world, where they are employed in a wide variety of tasks going even beyond passenger and cargo transport, including particularly agricultural duties.

There are usually no restrictions on the uses to which a customer can put his aeroplane once he has bought it and, as a comparatively expensive asset for the community as a whole in a developing country, any aircraft is usually employed to the maximum, with utilisation rates (in terms of hours per day) that often are the envy of commuter-operators in the developed countries. They are also flown in weather conditions and terrain that frequently, to Western commuter-operators, would want to experience.

In many regions some aircraft have become famous for the roles they have played, and are playing, in promoting economic and social development. For example, the de Havilland Canada Twin Otter, of which over 800 have been sold, is one of the great pioneering aircraft of the developing world in the past 30 years or so.

In the same category are the Embraer Bandeirante (over 400 sold), and the British Pilatus Britten-Norman Islander, while other aircraft such as the Short

Skyvan and 320 have also established high reputations for themselves in this growing market for rugged, reliable air transport.

It is now accepted in the third-level aviation manufacturing industry that the widest possible market lies with aircraft capable of meeting fully the range of operational demands likely to be incurred in the countries of the developing world, with their extremes of physical operating environments and often also the widely varying capabilities of the operators themselves.

An aircraft that can serve adequately in the comparatively luxurious surroundings of the commuter-style environment while also being capable of surviving a much tougher life, frequently involving heavy landings on unprepared strips in jungle or mountain areas in violent and rapidly changing weather conditions, is the aircraft most likely to win orders.

Spearhead

That aircraft has proved its capabilities in two long arduous sales and demonstration tours that together covered close to 100,000 miles of flying through the Middle East, south east Asia, the Far East, Australasia and Africa. In some instances, it was the first jet ever to use some remote airstrips, while it also amply demonstrated its ability to operate in all kinds of weather and terrain with a high degree of reliability.

It is likely that, as aviation in the developing countries expands, the greater part—perhaps as much as 70 per cent—of the anticipated market for about 6,500 "third-level" aircraft worth \$25bn by the end of this century will come from the developing countries of the Third World.

This is why the manufacturers are now paying so much attention in their designs to ruggedness and reliability as well as fuel economy, apart from such basic operational capabilities as short take-off and landing.

Michael Donne

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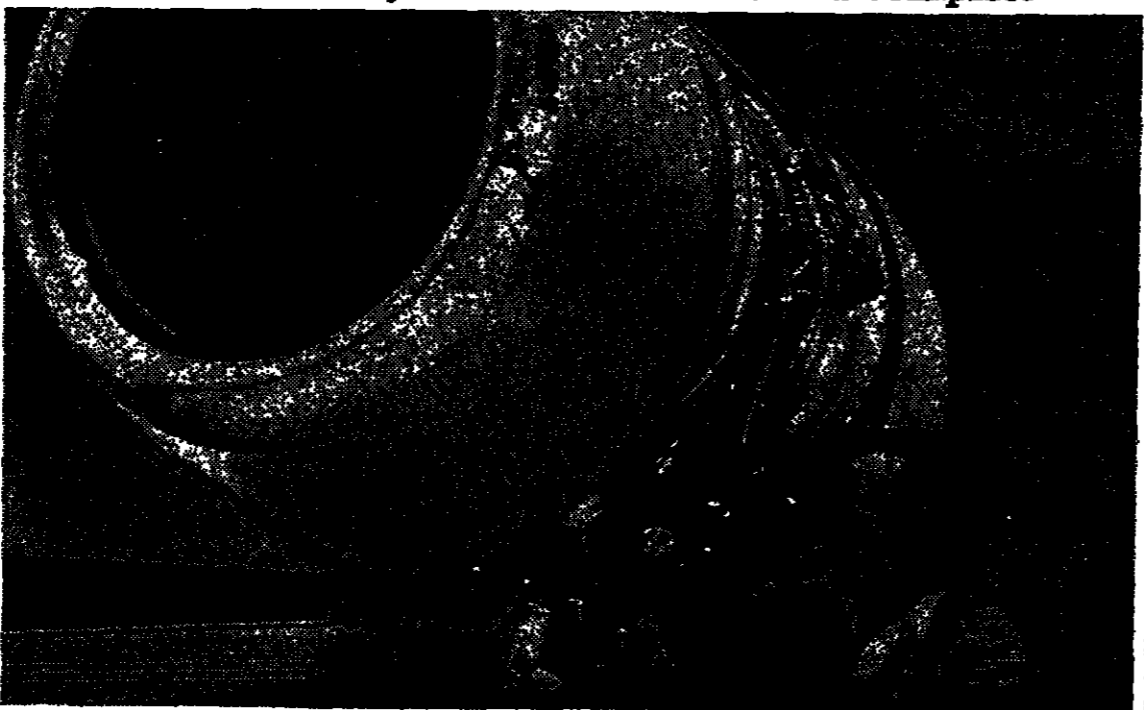
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Finance chases market

BECAUSE MOST of the operators involved in third-level aviation worldwide are small by comparison with the major scheduled airlines, their aircraft needs are also limited. They do not place big, multi-aircraft orders worth hundreds of millions of dollars, but rather they develop slowly, trying at best one or two aircraft a year, expanding their fleets as traffic growth dictates.

As with many of the bigger jets, the placing of an order is frequently dictated not so much by the merits of the aircraft involved or its suitability for a particular task as by the availability of finance at favourable terms.

The price range in the third-level aviation business is exceptionally wide, from about \$300,000-\$400,000 for a ten-seat Britten-Norman Islander up to about \$12m to \$13m for a British Aerospace four-engine 146 regional jet airliner.

The sources of such finance are very much the same as for the larger jet airliners. Most of the banks involved in the larger jet deals are also prepared to lend money to smaller operators for third-level aircraft types, but in addition, there are some specialist organisations, such as Airlease International Management in the UK, who can help in this field.

There is also a wide network of experienced aircraft agents and dealers, especially in the U.S. and Western Europe, many of whom specialise in the aircraft of one or more specific manufacturers, and who have either direct access to sources of finance or can smooth the path of the would-be purchaser in raising the necessary funds.

Many of the operators involved use their own local sources of finance, such as banks in the countries from which they operate. But the major international banks have been showing an increasing interest in this type of business in recent years, not least because of a perhaps belated recognition by some of them of the potentially very large size of the market.

The problem for the banks and other financing institutions is to be able to identify from the potentially good loan and investment opportunities in what is likely to be a rapidly burgeoning market, once the effects of the business recession worldwide have passed.

This is a much more difficult problem than is often realised. The third-level aviation industry is a far less well-documented aspect of international civil aviation than is, for example, the first-level scheduled airline

industry. In many countries, especially in the Third World, detailed statistics of third-level aviation operations are either totally non-existent or at best are patchy and unreliable, and it can take banks and other financing institutions a long time to build up a reliable background of data upon which to base investment decisions.

Governments are not normally involved, largely because the third-level operators in many countries are privately owned. Thus, the banks and other financing institutions have been obliged to rely heavily on the manufacturers and their dealers and agents for much of the information required upon which to base loan decisions.

This trend has spread through the entire aircraft manufacturing business, from the big jet field through to the smallest

aircraft types. Some big jet holders, such as McDonnell Douglas of the U.S., have set up their own financing companies specifically to help potential customers to try their aircraft. Other builders have made special arrangements of their own with banks and other lenders, so that cash is made available for potential purchasers who are creditworthy.

One example of this direct financial relationship between the manufacturer and the operator is the \$80m scheme for financing sales of the Type 330 and 360 commuter airliners built by Short Brothers of Belfast, arranged between the company and a group of U.S. and UK banks.

Under this scheme, whenever Shorts sells one of those airliners to a U.S. operator, it will be able to arrange the financing at the time without further recourse to the banks in each case.

The scheme was put together M.D.

Strong growth

CONTINUED FROM PAGE ONE

viding direct connections at major airports with long-haul operations.

Another development in the UK third-level airline scene that could expand rapidly is the provision of more international links from UK provincial cities to nearby Continental centres, such as Amsterdam and Brussels, to enable UK passengers to connect at those airports with long-distance flights, thereby avoiding travel to London.

The argument for these operations is that for many businessmen, especially in the North, the links currently provided from their home points to London (either Heathrow or Gatwick) to enable them to pick up long-distance flights, are either inadequate, or the distance involved is greater (and the fare therefore more expensive) than flying to the nearest Continental hub airport, usually Amsterdam Schiphol.

Much has been made of this factor by the Schiphol authorities, who have conducted a vigorous campaign in the UK on the theme that Schiphol is effectively not only already the "third airport" for London, but is also far closer to and more convenient for travellers from the Midlands and the North seeking connections to long-

haul flights. The only effective counters to this must be both a further extensive development of adequate commuter air links between the provinces and London, and the provision of more long-distance international air services from the provincial cities themselves, such as Manchester. The recent opening of Manchester's 300-ft runway extension, to give a 10,000-ft runway, is already encouraging more long-distance operators to use that airport.

At the same time, however, there is also an undeniable demand, especially from the business community, for more direct international short-haul air links between provincial cities and Continental destinations. Hitherto, many airlines have been reluctant to introduce such services because potential traffic densities have been insufficient to make regular operations with even the smallest twin-engine short-haul jet airliners economic.

But, here again, the increasing availability of smaller, 20- to 30-seat twin turbo-prop airliners is changing that situation, and it would be reasonable to expect an increase in the number of such services in the future, especially as the recession fades and business confidence expands.

While London struggles to find a third international airport, British Caledonian announce eleven of them.



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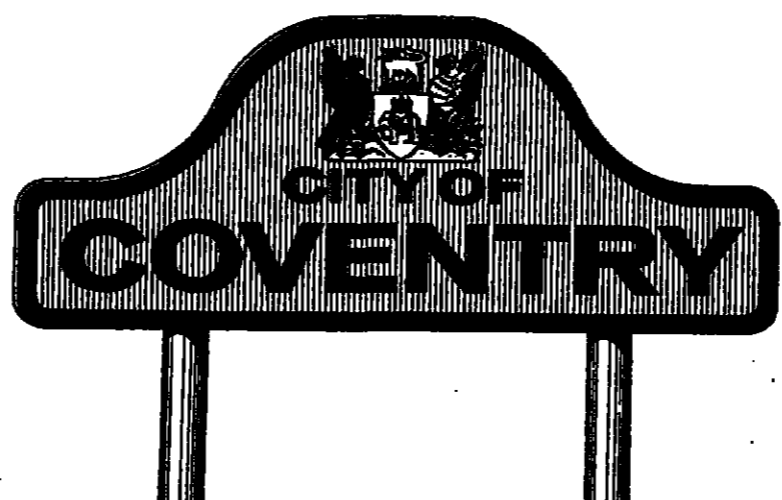
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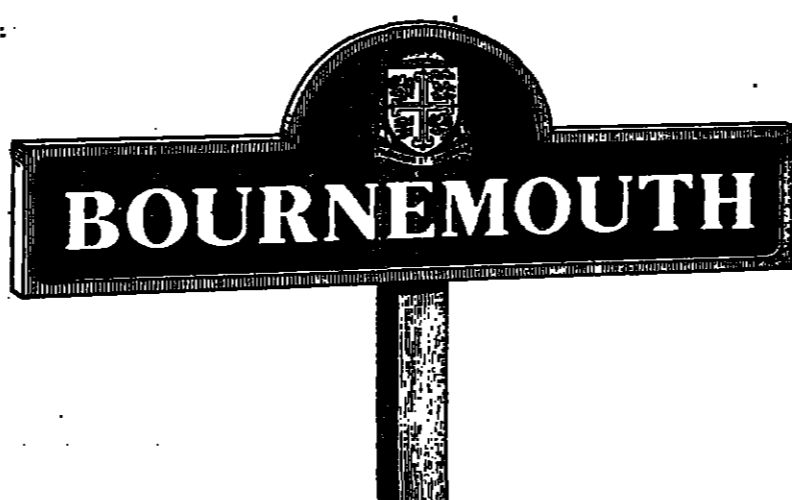
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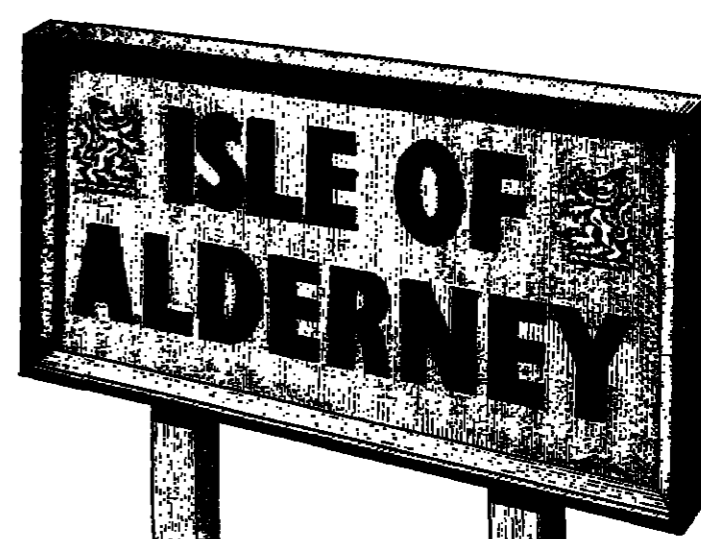
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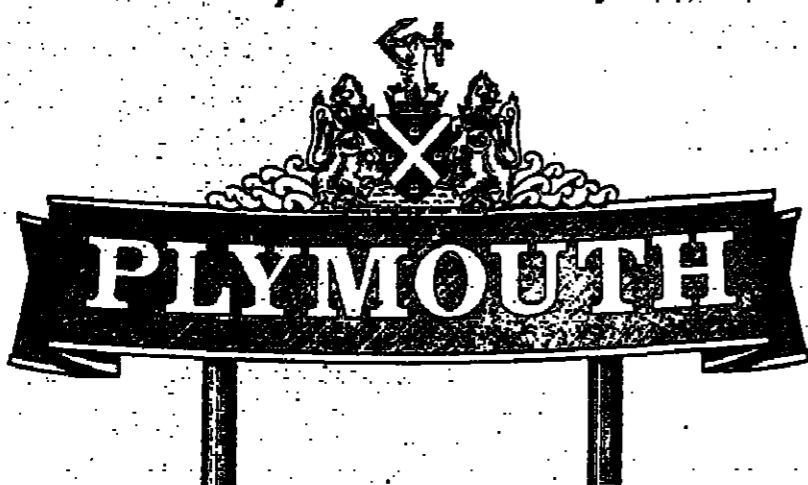
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COMMUTER AIRCRAFT IV

Lynton McLain reviews prospects in the UK and Western Europe and profiles some of the companies involved

Flexible control of services

PROFILE: GENAIR

Enjoying rapid growth

THE DEVELOPMENT of commuter and cross-border regional air operations in the UK and western Europe has been slower than in the U.S. There, they are an established form of transport for executives in a hurry and for all who want swift access to often isolated communities away from the main routes served by the major airlines.

Nevertheless, the potential in the UK and western Europe for these smaller scale airline operations is considerable, but is constrained, in the view of some operators in Britain, by the less-than-liberal attitudes of Continental governments to the provision of "regional" air services.

The UK Civil Aviation Authority and the Trade Department estimate that a total of 1,500 potential air routes exist under current bilateral agreements between governments in Europe. Only a relative handful of these routes have been taken up by operators.

The policy of the UK Government, a leading advocate of a more liberal regime for smaller airlines in Europe, is to support wherever possible the development of cross-border, regional, commuter-style air links, especially on non-trunk routes between smaller communities.

The government's broad aim is to have less stringent requirements for would-be operators and to try to remove the bureaucratic burden from smaller airlines.

Mr Iain Sproat, Parliamentary Under-Secretary of State at the Trade Department in London, went to Brussels, headquarters of the European Commission, in December to try to persuade his opposite numbers of the importance of accepting this more liberal approach to aviation in Europe. He made little progress, largely in the face of opposition from Denmark and Greece.

A further round of ministerial talks is to be held in June but there is no indication of any change of heart by Britain's partners in Europe.

Britain favours a measure of controlled liberalisation in the interpretation of bilateral air agreements. It does not want a revolution in the way air services are regulated, or total deregulation. Rather it favours an evolutionary approach to en-

courage the development of this "third-level" type of aviation in Europe.

In particular, Britain would like to see more development of less-popular routes by smaller, regional airlines, linking the industrial north and Midlands of Britain with the Continent.

At present, many of the services offered by the major scheduled airlines are based at the large, well-established airports. This has left regional airports with spare capacity and communities without regular air links with other industrial and business centres.

Reviews

In practical terms, the regulation of civil aviation in Britain is the subject of three separate reviews. The entire operations of the Civil Aviation Authority have been reviewed by the CAA following a request by Mr Sproat in July last year. The completed review was sent to the Trade Department in February this year, but no details have been published.

The second review, by the Trade Department, looked at the regulation of domestic air services.

This followed a visit by Mr Sproat to the U.S. The CAA compared the position on deregulation in Britain and the U.S. and discussed in a paper to the Secretary of State for Trade the scope for further liberalisation in Britain.

The CAA's own view of the need and prospect for change is that it is not against deregulation, but it believes that the room for deregulation and liberalisation is limited.

The regulation that the authority does apply to applications for new licences is limited to airline substitution, where one airline may wish to displace another, and to unnecessary duplication and capacity on routes.

The third inquiry into UK civil aviation was started by the Monopolies Commission in January when it began a review of air traffic control services.

One supporter of maintaining the status quo in the regulation of civil aviation in Britain is Mr Robin d'Erlanger, managing director of Metropolitan Airways, based at Bournemouth-Hurn Airport. He believes that the system as it stands is appropriate for Britain.

On the continent of Europe, the European Regional Airlines Organisation reported recently that its nine member airlines, from Germany, Austria, France, Switzerland and Sweden carried over half a million passengers and 650 tonnes of cargo last year.

The airlines, Aquair of Munich; Austrian Air Services of Vienna; Brit Air of Marseilles; Delta Air of Friedrichshafen; Flight Travel Service of Paderborn; Nuremberger Flugdienst of Nuremberg; Swedair of Stockholm and Tyrolean Airways of Innsbruck carried 588,700 passengers on more than 61,000 flights.

Ireland is another area where small regional airlines have developed to meet the needs of distant communities. Two of the country's regional carriers, Avair and Aer Arann, have recently been licensed to operate a series of new flights. Avair will fly from Dublin to Blackpool and East Midlands Airport near Derby, as well as from Cork to Jersey.

Aer Arann is to fly from Shannon to Belfast, Dublin to Manchester and to Cork as well as Cork to Belfast and Cardiff.

PROFILE: METROPOLITAN AIRWAYS

Capitalising on enthusiasm and personal links

THE Channel Islands, with their geographical isolation from the UK and mainland Europe, and their tax advantages, have spawned a number of small, regional airlines over the years. These include Alderney Air Ferries, the forerunner of the year-old Metropolitan Airways based at Bournemouth-Hurn Airport, the airline which took over Dan Air's "Link City" domestic routes last year.

Like many commuter and regional airlines, Alderney Air Ferries started life as the enthusiastic idea of one person with one aircraft. In this case it was Mr Ronald Ashley who founded the airline in July 1979 with an eight-seat Britten-Norman Islander for charter work to Bournemouth and Cher-

bourg. He acquired a second Islander in October 1980.

Mr Robin d'Erlanger, managing director of Metropolitan Airways, came into the regional airline business after qualifying as a chartered accountant in London. Flying was his hobby and he gained his commercial pilot's licence. After serving with Brynmor Airways in Plymouth he set up Air Westward in 1978-79 in association with Mr Peter Cadbury, former head of Westward Television.

The airline operated from Exeter to Gatwick, Glasgow, Paris and Amsterdam, before being taken over by Air UK.

Personal contacts mean a great deal in the entrepreneurial world of small airlines. It was through Mr David

Beety, a founder of the Caledonian Airways Group and now chairman of Metropolitan Airways, that Mr d'Erlanger met the founder of Alderney Air Ferries and was given the chance of taking over the airline.

By the end of 1980 he had turned the company into a regional airline with scheduled services between Bournemouth and Alderney, Cherbourg and Gatwick Airport.

Alderney Air Ferries already had the seeds of growth through its contact with Dan Air which handled the airline's aircraft, baggage and passengers at Bournemouth-Hurn Airport.

Dan Air operated scheduled services with 48-seat BAe 749 aircraft on its "Link City"

routes that connected Bournemouth with Cardiff, Manchester and Newcastle upon Tyne. The aircraft, however, proved too large for the market and typical local factors were about 44 per cent to 50 per cent of capacity.

The airline tried to economise by reducing its daily frequency to a twice a week service.

The burden of overheads Dan Air had to carry with its under-used aircraft on the routes forced the airline in early 1981 to propose giving up the routes.

Dan Air wanted to keep other services using Cardiff and Newcastle, but wanted a formula that would enable it to share its high overhead costs.

Alderney Air Ferries proposed operating Dan Air's "Link City" services using smaller, more economic aircraft

integrated with Dan Air's ground handling and sales and reservations staff. Dan Air agreed that Alderney Air Ferries should provide the aircraft, fly the routes, pay all expenses and take the risk.

With this agreed it was decided to change the name of the smaller airline to Metropolitan Airways. This company was registered in England, while Alderney Air Ferries (Holdings) as it was now called remained registered in Guernsey, and Alderney Air Ferries became a wholly-owned subsidiary acting only as a sales agent in Alderney.

"From the passengers' point of view our 'Link City' services appear as Dan Air Services, but they are Metropolitan Airways

services," Mr d'Erlanger said.

In the first full year of operations, to October 1982, the company had a turnover of £1.5m based on its daily departures from Bournemouth to Cardiff, Birmingham, Manchester and Newcastle, the simultaneous departures from Newcastle on the south-bound leg and flights to Gatwick, Alderney and Cherbourg.

The single fare on the winter timetable, which ended last month, from Bournemouth to Newcastle was £23, with an advanced purchase return at £20. Other typical fares were Bournemouth to Birmingham at £22.50 single and £21.50 Apex return and Bournemouth to Manchester at £21 single and £23 Apex return.

Eastern Airways and Casair, under the name Genair.

The larger Genair started with a fleet of five Short SD-330 30-seat airliners, one Short SD-360 36-seat airliner—the third production aircraft—and four Embraer Bandeirante 18-seaters, of which three are for charter or sub-lease operations.

The new airline was the first in Britain to take delivery of the Short SD-360 airliner, the enlarged and more powerful version of the highly-successful SD-330 aircraft.

Shortly after the acquisition of Eastern Airways and Casair, Genair and British Caledonian Airways announced the formation of British Caledonian Commuter Services, in November 1982.

British Caledonian welcomed the development as a way of encouraging commuter air services to feed passengers into its base at Gatwick Airport.

Other airlines are associated with the scheme, but Genair was the first and from November the smaller airline started to operate its own aircraft in the new British Caledonian Commuter Services colour scheme. The plan is for the entire Genair fleet to be repainted in the British Caledonian Commuter Services colours.

In return, as well as aircraft and passenger handling and joint promotion and marketing, Genair's Gatwick services will be carried in British Caledonian's worldwide reservations system.

Genair has grown rapidly since it carried its first scheduled passengers.

Genair forecasts that it will carry 100,000 passengers this year, compared with the aggregate of 62,000 passengers carried by Genair, Eastern Airways and Casair before the merger.

Turnover this year is expected to be £2m, based on a growing range of regional air services.



A Genair Short SD 360 for feeder services in British Caledonian colours

in Britain were based in Scotland and in the West Country. There were no commuter airlines in the North West.

Shortly after this first step towards commercial flying operations by General Relay, the management of Liverpool Airport, keen to encourage new services to London, asked the company if it would consider flying to Gatwick Airport with scheduled passenger services.

The two executives studied the commuter airline idea in the U.S. and launched the Liverpool to Gatwick scheduled air service, Genair's first, in August 1981, with an 18-seat Brazilian Embraer Bandeirante aircraft, operating two round trips a day. British Midland Airways continued to operate its Liverpool-

Heathrow services.

The Gatwick service was sufficiently successful for Genair to start additional services, linking Liverpool with Leeds and Amsterdam. The expansion encouraged the airline to consider plans for further expansion through the acquisition of other, smaller commuter airlines elsewhere in Britain.

By October last year, General Relay, as the owner of Genair, had acquired all the ordinary shareholding of Lease Air and of Casair Aviation Services. Lease Air traded as Eastern Airways based at Humberside and Casair was based on Teeside.

The acquisition resulted in the amalgamation of the three regional airlines, Genair,

It's the bottom line that counts

A FINANCIAL TIMES SURVEY

AEROSPACE

The Financial Times is proposing to publish its annual survey entitled Aerospace on May 23, 1983.

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COMMUTER AIRCRAFT V

BIRMINGHAM EXECUTIVE AIRWAYS

Building on routes to Europe

BRITAIN'S NEWEST regional commuter airline, Birmingham Executive Airways, has risen phoenix-like out of the decision by British Airways to cease operations on four of its routes from Birmingham to major business centres in Europe.

These routes, from Birmingham to Milan, Zurich, Brussels and Copenhagen, were operated by British Airways with 99-seat BAC 1-11 twin jet airliners at low, uneconomic load factors.

The state-owned airline ceased operations on the Milan, Zurich and Brussels routes on March 29 last year and stopped operating the service to Copenhagen on March 26 this year.

The decision by British Airways to pull out of these routes came as part of a network-wide rationalisation exercise which called for each route to be viable in its own right.

Only one of the routes was taken up. Immediately British Airways stopped operations, Birmingham Executive Airways took over the Birmingham - Milan route with a direct, twice-daily scheduled service from April 1 last year, based on a 44-seat Fokker F27 aircraft, which has less than half the capacity of the BA aircraft.

Milan and Zurich remained unattractive choices for conventional airlines largely because of the low traffic densities and low load factors when operated with medium-sized airliners such as the BAC 1-11 and the DC-9.

The Birmingham to Milan route was operated daily during the week by British Airways from 1978. In 1981 a Sunday service was added and the passenger demand gave a load factor of 54 per cent. In the 12 months from November 1980 to October 1981, British Airways carried a total of about 15,130 passengers; half of these were full fare passengers.

Captain Trevor Jones, managing director of Birmingham Executive Airways, was interested primarily in the full fare business traveller, which led him to make a break with Alldair, the company he joined in 1979 as chief pilot.

Alldair operated business routes from East Midlands airport to Edinburgh and Aberdeen and holiday flights to the Channel Islands. Captain Jones favoured operations orientated towards the business traveller exclusively and he left Alldair in October 1982.

The British Airways figures



Trevor Jones with Birmingham Executive's first BAC Jetstream 31, just delivered. The second aircraft is being delivered next month.

for its routes out of Birmingham showed that, typically, on the 1.11 flights to the Continent, only 50 of the 99 seats available would be taken and of these only between 20 and 25 were taken by passengers paying full fare. Captain Jones was convinced that these routes could be made profitable but only through the use of smaller aircraft, dovetailed to the modest business market.

He favoured the British Aerospace Jetstream 31 twin-turboprop executive aircraft with seats for 12 passengers. This, he felt, could be used to operate daily flights to Milan, Zurich and Copenhagen, with greater frequencies if the extra demand was there.

Informal talks were held with the Civil Aviation Authority and with West Midlands County Council. The council had invested £50m in a new passenger terminal at Birmingham Airport, to open in spring next year, and it did not want to lose any air links, least of all links with the European Community.

Captain Jones also approached local chambers of commerce, to sound out the idea of an air service for local business travellers. British Aerospace, keen to sell its Jetstream 31 aircraft, but anxious to know more about the proposed services, did its own research and found the idea viable.

The licences for Birmingham Executive Airways to operate the routes from the city to Milan, Zurich and Copenhagen were granted by the CAA on March 1, subject to the successful completion of a proposed share subscription scheme to finance the venture.

Captain Jones and his financial advisers and stockbrokers estimated that £850,000 would be needed to finance the airline. A total of 200,000 shares at £1 each were to be paid for by the founders of the airline with 300,000 shares on offer by subscription at £1.50 each.

Captain Jones exchanged letters of understanding with British Aerospace on November 23 last year and paid a non-refundable deposit with the manufacturer to secure delivery

in April and May this year. The two Jetstream aircraft are to be leased by Birmingham Executive Airways and the same, undisclosed terms are to be available for a third aircraft, if the airline takes up this option, by next spring.

Services from Birmingham to Milan and to Copenhagen are expected to start on April 28 this year and the service from Birmingham to Zurich on June 5.

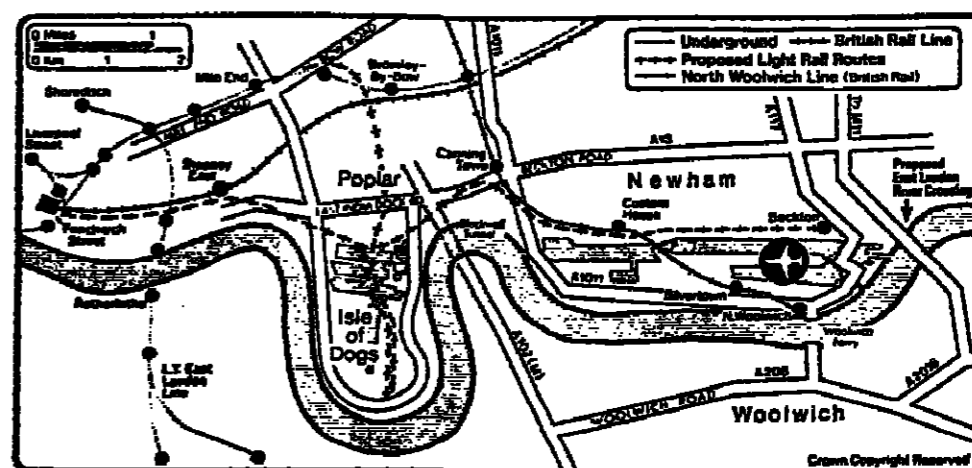
The new Milan service is to start as a daily return service, Monday to Friday, with an outbound departure to leave Birmingham early in the morning, with the inbound flight returning to Birmingham at midday. After three months the service is to be increased to twice daily on Mondays and Fridays.

Further increases in frequencies are also planned for the autumn.

The Birmingham to Zurich operation is also planned as a daily service Monday to Friday, as will the service to Copenhagen.

Total sales by the new airline in 1982-83 are forecast to be almost £2m, producing a loss after expenses of £221,000.

The airline has forecast that it will move into profitable operation in the second full year of operations, 1984-85, with an estimated pre-tax profit of £101,000 on total sales of £3.4m.



Inquiry into Docks STOLport

ONE OF the most dramatic developments for commuter aviation in the UK now being planned is a STOLport (for Short Take-off and Landing aircraft) in the new disused Docklands area of Newham in East London.

This scheme has been proposed to the London Docklands Development Corporation by Brymon Airways, the commuter airline, in conjunction with the civil engineering group John Mowlem. The plan is now to be the subject of a public planning inquiry, the date of which has yet to be announced by the Secretary of State for the Environment, but is likely to be this summer.

In the meantime, Brymon has applied to the Civil Aviation Authority for permission to operate services to Paris, Brussels, Rotterdam, Amsterdam, Frankfurt, Manchester, Plymouth and the Channel Islands.

The plan is to site the proposed STOLport in the Royal Albert Dock and King George V Dock, both now disused. The nearest homes are some distance away, so that environmental nuisance from the quiet STOL aircraft which would be used is likely to be at a minimum.

The four-engined ex-Havilland Canada Dash Seven aircraft which Brymon proposes to use is so quiet that it is claimed that probably, few

people locally would notice. The majority of flights would be around breakfast time or early evening, and there would be no night flying.

The 50-seat Dash Seven can use a runway of less than 2,500 feet, flying at very low speeds and taking-off and landing at a comparatively steep angle. Demonstration flights with the aircraft were carried out successfully on a rough strip in the Docklands last summer.

These aircraft could also handle up to 100,000 tons of freight a year, and encourage industrial and commercial companies to move back into the area.

M.D.

Fitting services to the market



An Air Ecosse Short 260. The airline made a profit of just under £1m last year.

THREE AIRLINES ply the Scottish air routes from a base in Scotland and by and large it is an expensive business.

Two made losses from their operations in Scotland last year. The Government or regional councils paid £300,000 in subsidies to maintain socially important air links: the eight airports run by the Civil Aviation Authority in the Highlands and Islands required a subsidy from Government of £3.8m last year, while together the four larger airports of Aberdeen, Prestwick, Edinburgh and Glasgow made an accumulated loss of £3.5m.

The three—British Airways, Loganair and Air Ecosse—have tried to adjust their operations to the size of market to reduce costs. While significant increases in air traffic within Scotland

cannot be expected the losses are slowly being trimmed and even turned into profits.

British Airways, in a thorough shake-up of its operations in Scotland, formed its Highland Division in May of 1982. It took off its fuel-hungry large Viscounts, replacing them with five HS-748 aircraft with 44 seats—more suited to demand from the more remote areas.

Staff were cut from 622 to 184 and the airline concentrated on reducing losses on 10 routes. One route between Aberdeen and Inverness was dropped and the frequency of other routes trimmed.

It was clear from the start of this trimming exercise that British Airways would not seek subsidies on its routes or financial assistance on its running costs.

Losses of £6.1m in 1982 for operations in Scotland before the formation of the new division were brought down to £500,000 in the first year of operation. But passenger traffic, as in many parts of the world, fell too—in the Highlands Division's case by 15 per cent.

British Airways forecasts a profit this year which will be the first time in 40 years of flying in Scotland that it has been able to make money on these routes.

The traveller is still the business flier and families on the islands needing to fly to the mainland. The tourist is a prime target for British Airways marketing.

Loganair, a subsidiary of the Royal Bank of Scotland, flies a fleet of 16 small aircraft. It suffered a heavy blow with the loss of an oil charter contract last year which contributed to a £1m loss for 1982. It was the third consecutive loss faced by the airline in as many years.

Seven aircraft were sold off

to reduce the financial burden. Improving the utilisation of aircraft. Money-making routes for Loganair have been its recently-acquired Edinburgh to Manchester and Glasgow to Belfast routes where passengers' response has been good.

Other routes in Scotland such as the link between Lerwick in Shetland to Edinburgh operate profitably.

But some require Government subsidies. The Scottish Development Department underwrites £150,000 on a link between Glasgow, Three, Barra and Skye, while the Western Isles Regional Council pays a similar amount to keep open an inter-island link between Stornoway, Benbecular and Barra.

The airline has opened negotiations with the Scottish Development Department and Strathclyde Regional Council for possible support on another loss-making route to Campbeltown in Kintyre.

Air Ecosse, operating out of

Aberdeen airport, is the exception among the three airlines. It makes a profit—just under £1m last year on its 12 routes.

The airline is a family firm, a subsidiary of the Fairlight Aviation and Engineering company of Biggin Hill, but is run independently by a small staff under Mr Paul Mulligan in Aberdeen.

Buying the right-sized plane for the route accounts partly for the airline's success. It expanded out of charter work with a fleet of Brazilian-built Bandeirante 15-seat aircraft. Today it has added two Short 3-60s with 36 seats and another smaller aircraft.

Air Ecosse routes between Aberdeen and Wick in the far north and between Aberdeen and Liverpool are among its best runs—but a new route soon to open connecting London Heathrow to Dundee could also be popular.

Mark Meredith



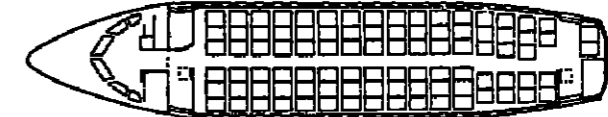
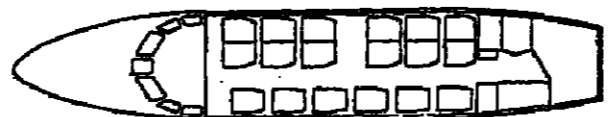
Unequalled
in its range of
regional
commuter
aircraft

No other company can respond to the growing needs of regional and commuter airlines throughout the world with the range of options offered by British Aerospace. Jet and turboprop aircraft now in production provide seating capacities from 16 to over 180 seats, with the passenger appeal and operating economy essential to build profitable traffic where other aircraft have failed, and further developments are in hand.

Jetstream 31 combines the amenities and comfort of a true airliner with the economy and structural integrity needed for successful high-frequency operation on short-haul commuter and feederline services between the smaller communities and urban airports. Powered by fuel-efficient turboprops, it has a roomy, walk-through, pressurized cabin capable of providing full in-flight services for up to 19 passengers.

748 has built profitable traffic on routes where other turboprop and jet airliners have proved uneconomic. It has won an unsurpassed record of reliability, averaging less than one maintenance man-hour per flying hour. With sales now at 360, production has been stepped up in response to increased demands occasioned by the 748's exceptional fuel economy and low operating costs. The new Super 748, which will become available in 1983, offers improved economy and comfort, and lower noise-levels at airports and in flight.

146 is the first jet airliner to be designed specifically to meet the needs of regional and commuter airlines through to the next century. Four new-technology high-bypass-ratio turbofans give this 80/109-seat feederliner low operating costs, ultra-low noise-levels and exceptional short-field performance which ensure profitability, flexibility and community acceptance on short-haul routes serving urban airports and hot-and-high airfields.

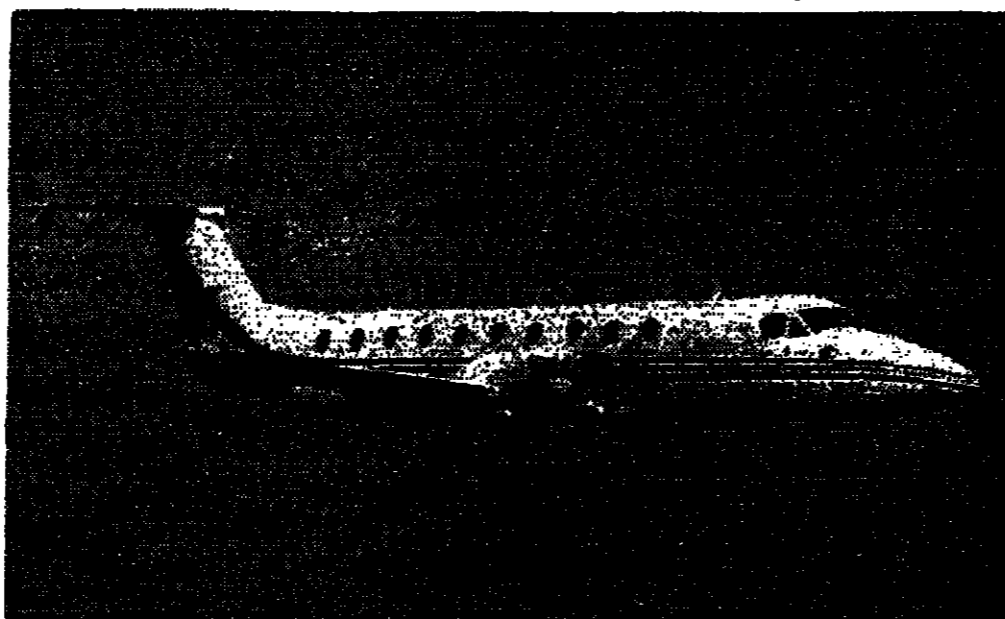
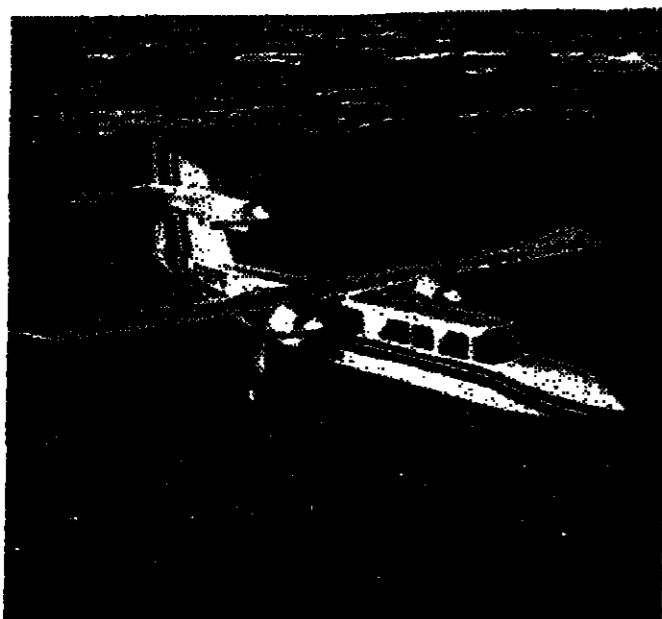


BRITISH AEROSPACE
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British Aerospace PLC, Kingston-upon-Thames, England

COMMUTER AIRCRAFT VI

Manufacturers all over the world are producing an increasingly wide range of designs to win a share of this \$25bn market



The aircraft: four-seaters up to jets

THE INCREASING size of the "third-level" aviation market, with its anticipated scope eventually for sales of about 6,500 aircraft worth about \$25bn through the rest of this century, is attracting increasing attention from the manufacturers.

Already a wide variety of aircraft is available for commuter, regional or local-service operations, ranging in size from the smallest four to six seat cabin aircraft up to the 109-seat Series 200 version of the British Aerospace 146 regional four-engine jet airliner.

In addition, a range of new aircraft of various sizes is under development, mostly for delivery from next year, which will widen the choice for third-level operators to an unprecedented degree, in terms of size, range-payload capability and price.

All these aircraft have many features in common. Apart from a few exceptions (such as the four-engine BAe 146 jet), they are twin-engine turbopropeller powered aircraft, giving exceptional quietness compared with jets, and all can be used from comparatively rugged, undeveloped fields and strips as well as normal airport runways. The exceptional flexibility and low cost which this gives are the most desirable features of all commuter/regional/third-level aviation operations.

While some jets, and even

some helicopters, are used for commuter operations (the latter especially for some inter-city operations, again mostly in the U.S.) the higher costs of such aircraft tend to confine them to the specialist types of commuter operations, and most operators, especially the smaller ones, tend to prefer turboprops.

Nevertheless, the jets and helicopters are finding increasing roles in commuter/regional/third-level operations, and the tendency is to evolve designs with technological improvements designed to save weight and fuel, to bring down operating costs and in turn make them more attractive to the growing band of operators.

The major fixed-wing manufacturers involved include Beech, Cessna, Piper, Fairchild Swearingen and Gulfstream Aerospace of the U.S.; Embraer of Brazil; British Aerospace, Short Brothers and Pilatus of the UK; Fokker of Holland; de Havilland Aircraft of Canada; Aerospaciale of France; Aeritalia of Italy; Israel Aircraft Industries; Saab-Scania of Sweden (in conjunction with Fairchild); Dornier of West Germany; and CASA of Spain, in association with Nurtanio of Indonesia.

The helicopter manufacturers involved include Bell, Hughes, Sikorsky and Boeing Vertol of the U.S.; Agusta of Italy; Westland of the UK; and Messer-

schmitt-Bolkow-Blohm of West Germany. All of these manufacture rotary-winged aircraft of various sizes which in one way or another can be used in commuter or third-level transport work.

In all, there are well over 50 different types of aircraft available from more than a score of separate manufacturers worldwide. While some of these are distinctly "airliners" in their own right, others are equally capable of being adapted to a wide range of other duties (and are frequently employed in those roles in many parts of the world).

Of all the types available, at the top end of the scale is the British Aerospace 146 short-range four-engine jet airliner. This is probably more accurately described as a "regional" airliner than a commuter type, since it is expected to be used in front-line scheduled airline service by many major operators.

Sales drive

Nevertheless, British Aerospace is aiming its sales drive worldwide at the largest possible market for short-haul air services of all kinds, especially in the U.S., Western Europe, the UK and Japan, and it believes that the range of uses for the 146 will be very wide, especially because of the aircraft's very short take-off

run. The 146 is being built in two versions: the Series 100, seating between 71 and 93 passengers, and the larger Series 200 seating between 82 and 109 passengers. Both versions are intended for use from rough, semi-prepared airstrips with minimum ground facilities, as well as from normal airfields with hard runways.

Quantity production is well under way at BAe's Hatfield, Hertfordshire, factory, and the first aircraft is due to enter service this spring. Production is being geared to a rate of three aircraft a month, and a major worldwide sales programme is already under way. Orders and options to date stand at 32 aircraft.

Also from the BAe stable, and equally suitable for commuter operations as well as a wide variety of other transport duties, are the BAe 748 twin-turboprop seating up to about 55 passengers (according to configuration desired), and the smaller 19-seat twin-turboprop BAe Jetstream 31, both of which are in full production. Looking beyond these, British Aerospace is now studying what is called the "Advanced Turboprop Transport" or ATP, based on the 748 but with an extended cabin to accommodate up to 64 passengers.

Also in the UK, Short Brothers of Belfast has already developed an enviable position

in the world commuter aircraft market, with its 33-seat S30 twin-turboprop aircraft, and its more recent stabilised 36-seat S60. These aircraft have already resulted in Shorts being dubbed the "Seattle of the Commuter / Regional Aircraft Business"—showing that its expertise in that sector of the market stands comparison with that of Boeing in the much bigger jet transport aircraft market.

The S60 in particular is already well ahead of any rivals in the 36-seat category, and is already demonstrating its ability to make its operators money, following entry into service in the U.S. a few months ago. Other versions of these aircraft are available, notably the Sherpa—a civil freighter version of the S60, while a military tactical transport version is also on offer.

Shorts also continues to build its long-running Skyvan light transport, widely used throughout the world for cargo and general purpose duties in both civil and military roles, especially in the developing countries.

Another major light transport aircraft builder is the Swiss-owned, but UK-based, Pilatus Britten-Norman, which is active in the Isle of Man building the Islander 10-seat twin-engine aircraft. Since production began in 1966-67, more than 1,000 aircraft have been delivered from Britten-Norman (as it was originally called before its takeover by Pilatus of Switzerland).

These have included 866 Islanders, five of the new turbine-powered Islanders, 68 Defenders (the military version), 73 three-engine Trislanders. A substantial number of aircraft are either in production or on order, and the company believes that market prospects are good, especially in the Third World.

One of the world's biggest manufacturers of light transport aircraft is de Havilland Aircraft of Canada, with its 30-seat, four-engine Dash Seven aircraft and its highly successful Twin Otter twin-engine 19-20 seater which, since 1966, has amassed more than 7m flying hours and an order book of

more than 800 aircraft.

The company's new addition to the range, the twin-engine Dash Eight, a 32-36-seat aircraft now under development, is due to make its maiden flight this summer with delivery to airlines beginning in 1984.

A feature of all the de Havilland Canada types is their exceptional Short Take-Off and Landing (STOL) performance which gives them a unique ability to operate from short, unprepared airstrips worldwide as well as from normal airports. This feature in particular has contributed to the success of the Twin Otter, now the world's best-selling light STOL transport aircraft.

Strong position

The Brazilian aircraft manufacturer, Embraer, has also established a strong position in the world's commuter and third-level airliner market with its 20-seat Bandeirante, of which more than 400 have been sold so far.

The company is now well ahead with the development and production of a new, larger, 30-seat twin-turboprop engine aircraft, the EMB-120 Brasília. This is expected to have its maiden flight this summer, with certification expected in 1984 and production deliveries to airlines starting in 1985.

By the end of February, Embraer held orders for more than 100 of this new-generation aircraft. Power plant for the Embraer will be the Pratt and Whitney (Canada) PW-115, rated at 1,500 shaft horsepower. Development of this engine, in the PW-100 series, is reported to be on schedule, with performance up to specification.

A feature of the growing commuter/regional/third-level aircraft market has been the emergence of international collaboration in the development of the new generation of aircraft involved. The British Aerospace 146 includes risk-sharing agreements with Avco Aerostructures of the U.S. for wing-boxes, and with Saab-Scania of Sweden for tailplanes and all movable control surfaces. This type of international collaboration has been carried

much further, however, in the emergence of joint ventures in both Western Europe and the U.S. Saab-Scania of Sweden and Fairchild of the U.S. are collaborating on the development of the 340, a 34-seat twin-turboprop airliner, described as the first truly "transatlantic manufacturing agreement" on a civil aircraft.

The 340 has already made its maiden flight, and development flying is well under way at Saab's Linköping airfield, with certification set for early 1984.

By the end of February, orders and options for the 340 stood at well over 60 aircraft from 12 operators. Elsewhere in Europe, Dornier of West Germany is delivering its Do-228 twin-engine aircraft, with an order book for over 100. Available in two versions, the Series 100 15-seater and Series 200 19-seater, the aircraft embodies much advanced technology, especially in its wing design. Dornier is believed to be considering plans for a new, larger version, of up to 30 seats, perhaps in collaboration with another manufacturer abroad.

CASA of Spain is working with Nurtanio of Indonesia on the development of the CN-235, a 35-seat twin-engine airliner which is being built both in Spain and in Indonesia, with deliveries to customers sche-

duled for the second half of 1984.

In the U.S., Beech Cessna and Piper all offer a wide range of small, light transport aircraft, variously seating upwards of four passengers. Although aimed primarily at the amateur business, executive and general aviation market, many of these aircraft are suitable for, and used by, the commuter operations, especially the twin turboprop aircraft seating upwards of six to eight passengers.

Such models include the Beechcraft King Air (up to 10 passengers), the Super King Air B-200 (up to 14), the Commuter C-480 (up to 15) and the more recently developed Commuter 1900, seating up to 19. The wide variety of Cessna types available includes the twin-engine Conquest II, seating up to 11, while Piper also offers several types, including the Navajo, Cheyenne and Cherokee six to eight-seaters, and the more recent T-1020 and T-1040 11-seater types.

Also in the U.S., the Commuter Aircraft Corporation is developing a 50-60-seat commuter airliner, the four-engine CAC-100 passenger and cargo transport, which is due to be rolled out this year, with deliveries to airlines in 1984.

Michael Dorn

Pratt & Whitney's PW100 is the only new turboprop designed specifically for the new generation of 30-70 passenger commuter aircraft.



Already selected by Embraer, de Havilland, Aerospaciale/Aeritalia and British Aerospace.



Helicopter fleet expands

THE COMPARATIVELY late acceptance of the helicopter as a commuter vehicle stems entirely from the lack hitherto of rotary-winged aircraft with suitable operating costs. Earlier helicopters of the 1960s and 1970s tended to be derived from military types, and were expensive to use in a civil role, and many of the commuter-style operators that emerged in the U.S. in that period, even though subsidised by State aid, failed to survive. The fares they were obliged to charge the passengers proved too high, relative to the reliability of the service and the standards of comfort they could offer, despite the undeniable saving in time they provided.

This situation is now changing, and although the helicopter is still very much in a minority in terms of numbers compared with its fixed-wing counterparts, it is attracting increasing attention among commuter airline operators.

The primary market at present still appears to be in the provision of links either between city centres and airports, or between outlying urban areas (especially in well-to-do areas where there is a proportionately higher percentage of resident business travellers) and the airports, and especially where road congestion is often severe.

Congestion

The problem of road congestion, identified in cities as far apart as London, New York, Houston and Sydney is probably endemic to every big city in the world where international air communications are vital. In the UK, road congestion—so far only partially relieved by the construction of motorway links—led some time ago to the development of a direct inter-airport helicopter link between Heathrow and Gatwick for the benefit of connecting airline

passengers. In New York, British Airways provides a free helicopter service for its Concorde passengers between Kennedy Airport and Manhattan, while Pan American offers a free helicopter service between Kennedy and Manhattan for its First Class and Clipper Club passengers.

While as yet there is no comparable regularly-scheduled city-centre to airport helicopter service in London for fixed-wing airline passengers, there is at least a floating "helicopter bridge" to the City which is sometimes used for such purposes, though the number of aircraft permitted to use it on any one day are restricted.

Although the principal factor which hitherto has restricted the use of helicopters in commuter-style operations has been the lack of suitable types of aircraft, there are other problems. One of these has been noise. The earlier generation of helicopters was undoubtedly exceptionally noisy and this has left a legacy among local authorities and communities of suspicion or outright hostility which is still a big stumbling block to helicopter commuter operations.

What is already acting as the catalyst for change, however, is the availability of quieter, more economic rotary-winged aircraft in the shape of such types as the Sikorsky S76 from the U.S. and the more recently developed Westland 30 in the UK.

The Westland 30 is a 17-seat twin-turbine-engine aircraft, developed by Westland Helicopters of Yeovil. There are already about 30 orders and options for the machine and two have already entered service with British Airways Helicopters in oil and gas industry support operations in the North Sea.

This aircraft is expected to assume a true commuter role soon, when it enters service

with the Los Angeles-based helicopter airline, Airspur. That operator intends to put the six aircraft that it has on order into service on a network of high-frequency scheduled routes between Los Angeles and the Greater Los Angeles area, beginning with a link between Fullerton and Los Angeles International Airport—a truly "commuter-style" operation between an urban area and a major domestic and international "hub" airport.

Watching

Considerable interest has already been expressed by other potential helicopter commuter operators in the U.S., and they will be watching the Airspur operation closely. Westland itself is hoping that, within a few months, the Airspur link will be repeated by others in many parts of the U.S.


Indeed, the manufacturer believes that during the rest of this decade it will be able to sell a large number of Westland 30s in this commuter role, although there are many other transport applications for the aircraft, for which sales are just

as assiduously being sought. Particular emphasis is placed by Westland on the reliability of the Westland 30, stemming from the high mechanical integrity of all its components. The point made by Westland is that, as a weather machine, while the standards of comfort are being improved steadily, the Westland 30 is already, in its own right, a very safe aircraft. A recent study by the U.S. National Transportation Safety Board showed that, over the past 10 years, U.S. helicopter accident rates had fallen fast, and are now little higher than those for fixed-wing aircraft.

Noise, as mentioned earlier, is still a problem in many communities, even in the U.S., where in the UK it has been a major factor in keeping down the levels of helicopter operations into and out of the London area, with a still comparatively high level of outright hostility towards the helicopter from local planning authorities and residents.

Michael Dorn

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